

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin, J. Lee Examiner #: 176060 Date: 9-9-03  
 Art Unit: 1752 Phone Number 305-0504 Serial Number: 101073.223  
 Mail Box and Bldg/Room Location: 9B05 Results Format Preferred (circle): PAPER DISK E-MAIL

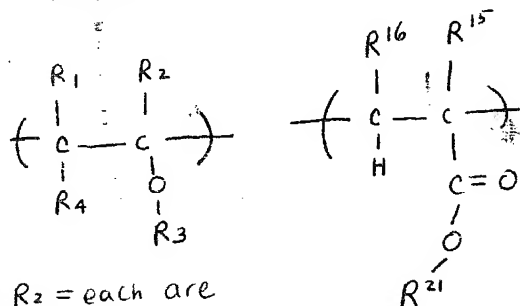
If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Polymer resist composition and Patterning Process  
 Inventors (please provide full names): Nishi, Tsunehiro; Nakashima, Mutsuo;  
Tachibana, Seiichiro; Funatsu, Kenji  
 Earliest Priority Filing Date: 2-13-2002

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

A Polymer comprising <sup>following</sup> repeating units (has to have both of these units)



R<sub>1</sub>, R<sub>2</sub> = each are Hydrogen or methyl

R<sub>3</sub> & R<sub>4</sub> = each are Hydrogen, or a straight, branched, or cyclic, monovalent hydrocarbon gp. of 1-15 carbon atoms which may contain a hetero atom, and R<sub>3</sub> & R<sub>4</sub> may bond together to form a ring, wherein R<sup>3</sup> & R<sup>4</sup> together

represent a straight, branched, or cyclic, divalent hydrocarbon gp. of 1-15 carbon atoms which may contain a hetero atom.

R<sup>15</sup> = H, methyl, or -CH<sub>2</sub>CO<sub>2</sub>R<sup>17</sup>

(where R<sup>17</sup> is straight, branched, branched or cyclic alkyl gp. of 1-15 carbon atoms)

R<sup>16</sup> = H, methyl, or CO<sub>2</sub>R<sup>17</sup> (R<sup>17</sup> explained above)

R<sup>21</sup> = acid labile gp (such as

## STAFF USE ONLY

Searcher: Korner RM  
 Searcher Phone #: 305 3542  
 Searcher Location: \_\_\_\_\_  
 Date Searcher Picked Up: 9/11/03  
 Date Completed: 9/12/03  
 Searcher Prep & Review Time: \_\_\_\_\_  
 Clerical Prep Time: \_\_\_\_\_  
 Online Time: 2h

## Type of Search

NA Search (#) \_\_\_\_\_  
 AA Search (#) \_\_\_\_\_  
 Structure (#) ☒ \_\_\_\_\_  
 Bibliographic \_\_\_\_\_  
 Litigation \_\_\_\_\_  
 Fulltext \_\_\_\_\_  
 Patent Family \_\_\_\_\_  
 Other \_\_\_\_\_

## Vendors and cost where applicable

STN ☒ \_\_\_\_\_  
 Dialog \_\_\_\_\_  
 Questel/Orbit \_\_\_\_\_  
 Dr.Link \_\_\_\_\_  
 Lexis/Nexis \_\_\_\_\_  
 Sequence Systems \_\_\_\_\_  
 WWW/Internet \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

a tertiary alkyl gp. having cyclic structure

\* but doesn't have to be this

=> file reg

FILE 'REGISTRY' ENTERED AT 17:10:19 ON 12 SEP 2003  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 10 SEP 2003 HIGHEST RN 583020-12-6  
DICTIONARY FILE UPDATES: 10 SEP 2003 HIGHEST RN 583020-12-6

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> file caplus

FILE 'CAPLUS' ENTERED AT 17:10:21 ON 12 SEP 2003  
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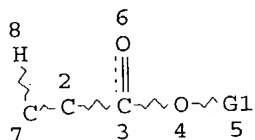
FILE COVERS 1907 - 12 Sep 2003 VOL 139 ISS 12  
FILE LAST UPDATED: 11 Sep 2003 (20030911/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

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L3	SCR 2043
L5	SCR 1199
L9	STR

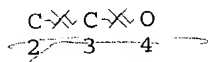




VAR G1=AK/CB  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE  
 L10 STR



NODE ATTRIBUTES:  
 NSPEC IS RC AT 2  
 NSPEC IS RC AT 3  
 NSPEC IS RC AT 4  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
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 L21 273822 SEA FILE=REGISTRY SSS FUL L9 AND L10 AND L13 AND L3 AND L5  
 L22 274765 SEA FILE=CAPLUS ABB=ON PLU=ON L21  
 L26 67 SEA FILE=CAPLUS ABB=ON PLU=ON L22 (L) (RESIST OR PHOTORESIST) (5  
 A) COMPOSIT? AND PATTERN? (4A) PROCESS?  
 L27 2121 SEA FILE=CAPLUS ABB=ON PLU=ON L22 (L) (RESIST OR PHOTORESIST) (5  
 A) COMPOSIT?  
 L28 73 SEA FILE=CAPLUS ABB=ON PLU=ON L22 (L) PATTERN? (4A) PROCESS?  
 L29 27 SEA FILE=CAPLUS ABB=ON PLU=ON L27 AND L28  
 L30 67 SEA FILE=CAPLUS ABB=ON PLU=ON L26 OR L29

=> d ti 1-67

L30 ANSWER 1 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 TI Chemically amplified resist compositions and **patterning**  
**process**

- L30 ANSWER 2 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Chemically amplified positive resist composition and **patterning process**
- L30 ANSWER 3 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymer and resist composition for deep-UV and electron beam **patterning process**
- L30 ANSWER 4 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI 5-Methylene-1,3-dioxolan-4-one derivatives, process for their production, polymers of the derivatives, resist compositions, and **pattern formation process**
- L30 ANSWER 5 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Negative photopolymer compositions, photosensitive elements involving resist layers of the compositions, their patterning, and fabrication of printed wiring boards thereof
- L30 ANSWER 6 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymers, resist compositions and **patterning process**
- L30 ANSWER 7 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Positive-working photoresist composition containing at least two acid-sensitive resins of acid-sensitive groups
- L30 ANSWER 8 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Reflection-inhibiting resin composition used in **process** for forming photoresist **pattern**
- L30 ANSWER 9 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist composition and **patterning process**
- L30 ANSWER 10 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Chemically-amplified negative-working resist compositions for processing with electron beam or x-ray
- L30 ANSWER 11 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Chemically-amplified negative-working resist compositions for processing with electron beam or x-ray
- L30 ANSWER 12 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymers, resist compositions and **patterning process**, novel tetrahydrofuran compounds and their preparation
- L30 ANSWER 13 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymer, resist composition and **patterning process**
- L30 ANSWER 14 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Preparation and **patterning process** of silicon-containing chemical amplification positive resist compositions
- L30 ANSWER 15 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

TI Colored photoresist composition for manufacturing color filter for imaging device

L30 ANSWER 16 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymer, resist composition and **patterning process**

L30 ANSWER 17 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymer, resist composition and **patterning process**

L30 ANSWER 18 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Amine compounds, resist compositions and **patterning process**

L30 ANSWER 19 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Preparation of polymer, and resist composition using the polymer

L30 ANSWER 20 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymer, resist composition and **patterning process**

L30 ANSWER 21 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Amine compounds for resist compositions and **patterning process**

L30 ANSWER 22 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymers of polycyclic compounds, resist composition and **patterning process**

L30 ANSWER 23 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Positive-working resist compositions containing sulfonic acid generators

L30 ANSWER 24 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist composition and **patterning process**

L30 ANSWER 25 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist compositions comprising acrylate fluorinated resin and **patterning process**

L30 ANSWER 26 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist compositions and **patterning process**

L30 ANSWER 27 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymers, resist compositions and **patterning process**

L30 ANSWER 28 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photoresist composition for resist flow process

L30 ANSWER 29 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Positive resist composition and **process** for forming resist **pattern** using photosensitive laminate

L30 ANSWER 30 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist **pattern, process** for producing the same, and

utilization thereof

- L30 ANSWER 31 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photoresist composition for flow **process**, lithographic  
**pattern** formation, and semiconductor device
- L30 ANSWER 32 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymers, resist compositions and **patterning process**
- L30 ANSWER 33 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Ester compounds, polymers, resist compositions and **patterning process**
- L30 ANSWER 34 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Alkali-developable photosensitive resin composition for photoresist method of forming pattern, and electronic parts
- L30 ANSWER 35 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Positive-working photosensitive coating composition, manufacture thereof, and patterning method
- L30 ANSWER 36 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Polymer, resist composition and **patterning process**
- L30 ANSWER 37 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Novel polymers, chemical amplification resist compositions and **patterning process**
- L30 ANSWER 38 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Fluorine-containing polymers, resist compositions and **patterning process**
- L30 ANSWER 39 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist exposure method using polymer having extended .pi. electron system
- L30 ANSWER 40 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Positive resist composition with high transparency to UV laser comprising acrylic resin with fluorine-containing group and **patterning process**
- L30 ANSWER 41 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Chemically amplified positive resist composition and patterning method
- L30 ANSWER 42 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist composition and **patterning process**
- L30 ANSWER 43 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist compositions comprising sulfonium photoacid generator for ArF excimer laser lithography and **patterning process**
- L30 ANSWER 44 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Chemically amplified photoresist compositions and process for the

formation of stable photoresist patterns

- L30 ANSWER 45 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Novel onium salts as photoacid generators for resist compositions and **patterning process**
- L30 ANSWER 46 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Novel ester compounds, polymers, resist compositions and **patterning process**
- L30 ANSWER 47 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist patterning method
- L30 ANSWER 48 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Ester monomers, polymers, resist compositions and **patterning process**
- L30 ANSWER 49 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Light-sensitive resist resin composition for semiconductor fabrication and **process** for forming **pattern** using same
- L30 ANSWER 50 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photosensitive resin composition, pattern formation using same, and manufacture of electronic device
- L30 ANSWER 51 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist resin, resist resin composition, and **process** for **patterning** therewith
- L30 ANSWER 52 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Chemically amplified photoresist composition and patterning using it
- L30 ANSWER 53 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist compositions containing phenolic resins and acrylic resins and resist pattern formation
- L30 ANSWER 54 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Radiation-sensitive resin composition using novel copolymer
- L30 ANSWER 55 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Preparation of resist patterns and etched patterns
- L30 ANSWER 56 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photosensitive adhesive composition
- L30 ANSWER 57 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Patterning of positive-working resists
- L30 ANSWER 58 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resist and **process** for forming **patterns** using the same
- L30 ANSWER 59 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

TI Fabrication of electronic devices utilizing lithographic techniques and resist from triallylsilylalkyl acrylate copolymer

L30 ANSWER 60 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Fine insulator pattern formation

L30 ANSWER 61 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Electrode **pattern formation process**

L30 ANSWER 62 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Materials for release-developable pattern formation

L30 ANSWER 63 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Solid state imaging elements

L30 ANSWER 64 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Photoresist pattern formation

L30 ANSWER 65 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Solid state devices produced by plasma developing of resists

L30 ANSWER 66 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Resists for fine **patterns** and **pattern formation process**

L30 ANSWER 67 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
TI Inorganic **pattern formation process**

=> d ibib abs hitstr ind total l30

L30 ANSWER 1 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:413943 CAPLUS

DOCUMENT NUMBER: 138:409379

TITLE: Chemically amplified resist compositions and **patterning process**

INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Kawai, Yoshio; Sasago, Masaru; Endo, Masayuki; Kishimura, Shinji; Ootani, Michitaka; Komoriya, Haruhiko; Maeda, Kazuhiko

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 29 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003099901	A1	20030529	US 2002-256141	20020927
JP 2003177539	A2	20030627	JP 2002-276743	20020924
PRIORITY APPLN. INFO.:			JP 2001-296871 A	20010927

KOROMA EIC1700

OTHER SOURCE(S): MARPAT 138:409379

AB A chem. amplified photoresist compn. comprises (A) a polymer comprising recurring units contg. at least one fluorine atom, (B) a compd. of  $R_4(R_3R_1R_2COR_5)_n$  ( $R_{1,2} = H, F, \text{alkyl, fluorinated alkyl}$ ;  $R_3 = \text{single bond, alkylene}$ ;  $R_4 = n\text{-valent arom., cyclic diene group}$ ;  $R_5 = H, C(=O)R_6$ ;  $R_6 = H, Me$ ;  $n = 2, 3, 4$ ), (C) an org. solvent, and (D) a photoacid generator. The chem. amplified photoresist is sensitive to high-energy radiation and has improved sensitivity and transparency at a wavelength of less than 200 nm.

IT 475471-96-6 508217-84-3 508217-86-5  
532390-05-9 532390-06-0

RL: TEM (Technical or engineered material use); USES (Uses)  
(polymer; chem. amplified resist compns. and  
patterning process contg.)

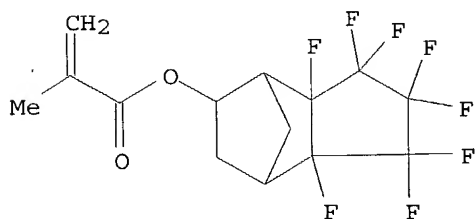
RN 475471-96-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 1,1,2,2,3,3,3a,7a-octafluorooctahydro-4,7-methano-1H-inden-5-  
yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 399518-72-0

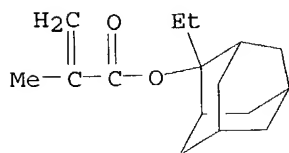
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CM 2

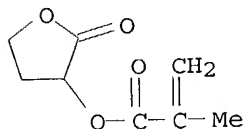
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CMF C16 H24 O2



CM 3

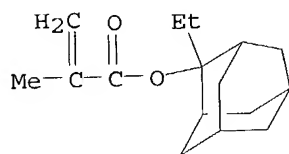
CRN 195000-66-9  
CMF C8 H10 O4



RN 508217-84-3 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 4,5-difluoro-2,2-bis(trifluoromethyl)-1,3-dioxole and  
tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

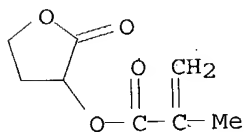
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CRN 209982-56-9  
CMF C16 H24 O2



CM 2

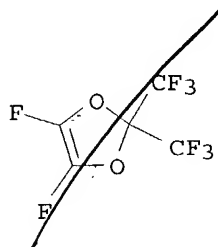
CRN 195000-66-9  
CMF C8 H10 O4



CM 3

CRN 37697-64-6  
CMF C5 F8 O2

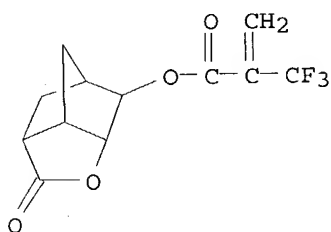




RN 508217-86-5 CAPLUS  
 CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer  
 with .alpha.,.alpha.-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-  
 ethanol and hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl  
 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

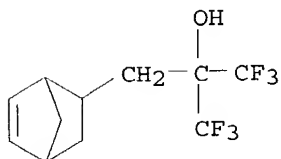
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CRN 479084-29-2  
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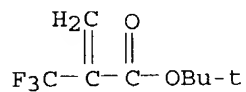
CM 2

CRN 196314-61-1  
 CMF C11 H12 F6 O



CM 3

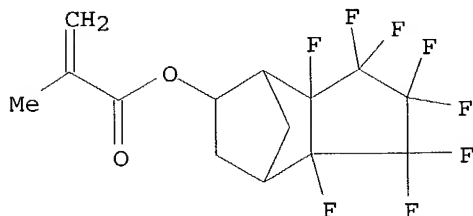
CRN 105935-24-8  
 CMF C8 H11 F3 O2



RN 532390-05-9 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
 polymer with 4-(1-methylethenyl)-.alpha.,.alpha.-  
 bis(trifluoromethyl)benzenemethanol and 1,1,2,2,3,3,3a,7a-  
 octafluorooctahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

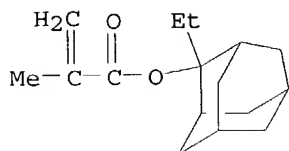
CM 1

CRN 399518-72-0  
 CMF C14 H12 F8 O2



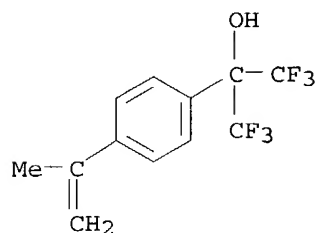
CM 2

CRN 209982-56-9  
 CMF C16 H24 O2



CM 3

CRN 120721-71-3  
 CMF C12 H10 F6 O



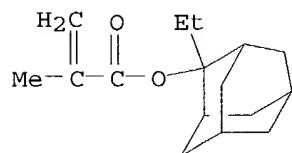
RN 532390-06-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester, polymer with 4-(1-methylethenyl)-.alpha.,.alpha.-bis(trifluoromethyl)benzenemethanol and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

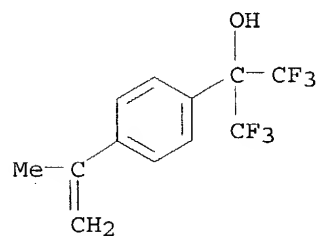
CMF C16 H24 O2



CM 2

CRN 120721-71-3

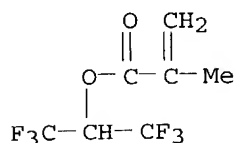
CMF C12 H10 F6 O



CM 3

CRN 3063-94-3

CMF C7 H6 F6 O2



IC ICM G03F007-004  
 NCL 430270100; 430907000; 430326000  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 76  
 ST chem amplified photoresist compn **patterning process**  
 IT Photolithography  
 Photoresists  
 (chem. amplified resist compns. and **patterning process**)  
 IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (chem. amplified resist compns. and **patterning process** contg.)  
 IT 123-31-9, 1,4-Benzenediol, uses 126-00-1 802-93-7 1992-15-0  
 2180-30-5 14417-01-7 150690-14-5 153821-75-1 292826-36-9  
 532389-95-0 532389-96-1 532389-97-2 532389-98-3 532389-99-4  
 532390-00-4 532390-01-5 532390-02-6 532390-03-7 532390-04-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dissoln. accelerator; chem. amplified resist compns. and **patterning process** contg.)  
 IT 475471-96-6 508217-83-2 508217-84-3  
 508217-86-5 532390-05-9 532390-06-0  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polymer; chem. amplified **resist compns.** and **patterning process** contg.)

L30 ANSWER 2 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:356071 CAPLUS  
 DOCUMENT NUMBER: 138:346500  
 TITLE: Chemically amplified positive resist composition and **patterning process**  
 INVENTOR(S): Takeda, Takanobu; Watanabe, Osamu; Maeda, Kazunori; Miyakoshi, Hiroshi  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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 EP 1308782 A1 20030507 EP 2002-257508 20021029  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  
 JP 2003131384 A2 20030509 JP 2001-331757 20011030  
 US 2003118934 A1 20030626 US 2002-283263 20021030  
 JP 2001-331757 A 20011030

PRIORITY APPLN. INFO.:

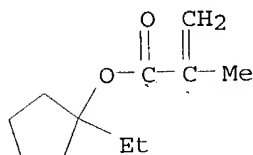
AB Title resist compns. comprises as the base resin a polymer contg.  
 structural repeating units derived from tert-amyloxystyrene which is  
 decomposable under the action of an acid to increase soly. in alkali. The  
 compn. has advantages including a significantly enhanced contrast of  
 alkali dissoln. rate before and after exposure, a high sensitivity, and a  
 high resoln. in the baking temp. range of 100-110.degree. which is  
 unachievable with tert-butoxystyrene-based polymers. The compns. are best  
 suited as a chem. amplified resist material for micropatterning in the  
 manuf. of VLSI.

IT 517906-74-0DP, hydrolytically deblocked products  
 517906-77-3DP, hydrolytically deblocked products  
 517906-78-4DP, hydrolytically deblocked products  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
 (chem. amplified pos. resist compn. comprising  
 tert-amyloxystyrene-based polymer)

RN 517906-74-0 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
 1-(1,1-dimethylpropoxy)-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI)  
 (CA INDEX NAME)

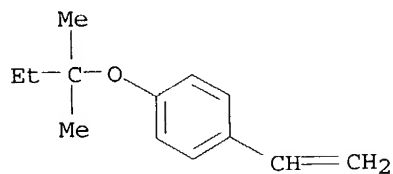
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CRN 266308-58-1  
 CMF C11 H18 O2



CM 2

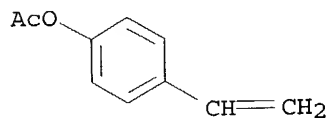
CRN 146716-59-8  
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CM 3

CRN 2628-16-2

CMF C10 H10 O2



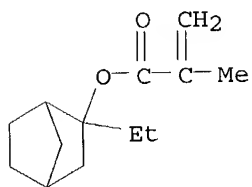
RN 517906-77-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 1-(1,1-dimethylpropoxy)-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 330595-98-7

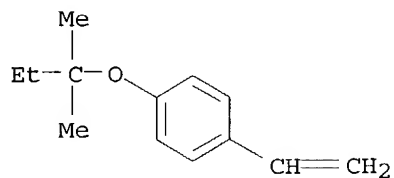
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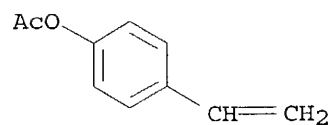
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CM 3

CRN 2628-16-2

CMF C10 H10 O2



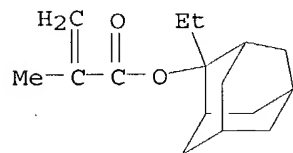
RN 517906-78-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1-(1,1-dimethylpropoxy)-4-ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

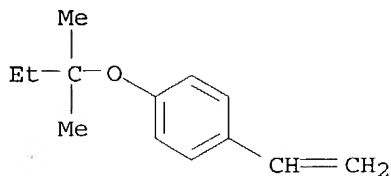
CMF C16 H24 O2



CM 2

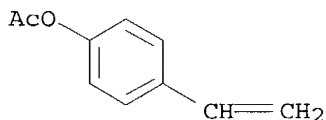
CRN 146716-59-8

CMF C13 H18 O



CM 3

CRN 2628-16-2  
CMF C10 H10 O2



IC ICM G03F007-039  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST chem amplified pos resist tert amyloxystyrene polymer  
IT Photoimaging  
(chem. amplified pos. resist compn. and **patterning process**)  
IT Positive photoresists  
(chem. amplified pos. resist compn. comprising tert-amyloxystyrene-based polymer)  
IT 517906-72-8DP, hydrolytically deblocked products **517906-74-0DP**, hydrolytically deblocked products **517906-77-3DP**, hydrolytically deblocked products **517906-78-4DP**, hydrolytically deblocked products 517906-79-5DP, hydrolytically deblocked products  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(chem. amplified pos. **resist compn.** comprising tert-amyloxystyrene-based polymer)  
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 3 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2003:355687 CAPLUS  
DOCUMENT NUMBER: 138:376401  
TITLE: Polymer and resist composition for deep-UV and electron beam **patterning process**  
INVENTOR(S): Nishi, Tsunehiro; Hasegawa, Koji; Kinsho, Takeshi  
PATENT ASSIGNEE(S): Japan  
SOURCE: U.S. Pat. Appl. Publ., 29 pp.



DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

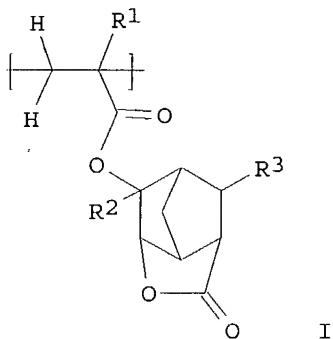
CODEN: USXXCO

Patent

English

1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003087183	A1	20030508	US 2002-230341	20020829
JP 2003147023	A2	20030521	JP 2002-244664	20020826
PRIORITY APPLN. INFO.: GI			JP 2001-262833 A	20010831



AB Disclosed is a polymer comprising recurring units of formula I (R1 = H, Me; R2 = H, C1-8-alkyl; R3 = CO2R4; R4 = C1-15-alkyl) and recurring units having a carboxylic acid protected with an acid-decomposable protecting group contg. an adamantane structure or tetracyclo-[4.4.0.12,5.17,10]dodecane structure and having a Mw of 1,000-500,000. A resist compn. comprising the inventive polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity, resoln. and etching resistance and lends itself to micropatterning with electron beams or deep-UV.

IT 521950-55-0P 521950-56-1P 521950-58-3P  
 521950-59-4P 521950-60-7P 521950-62-9P  
 521950-63-0P 521950-64-1P 521950-65-2P  
 521950-66-3P 521950-67-4P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymer and resist compn. for deep-UV and electron beam patterning process)

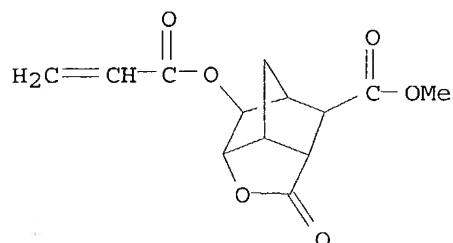
RN 521950-55-0 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 449759-66-4

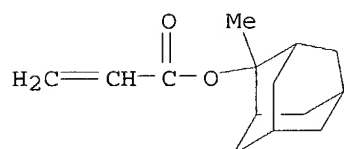
CMF C13 H14 O6



CM 2

CRN 249562-06-9

CMF C14 H20 O2



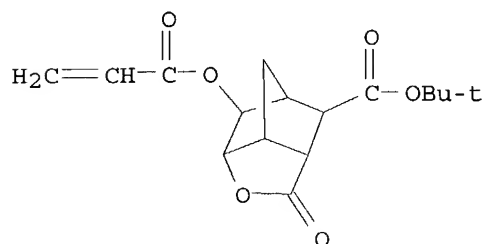
RN 521950-56-1 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, 1,1-dimethylethyl ester, polymer with 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 436853-05-3

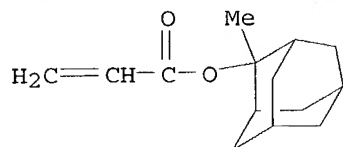
CMF C16 H20 O6



CM 2

CRN 249562-06-9

CMF C14 H20 O2



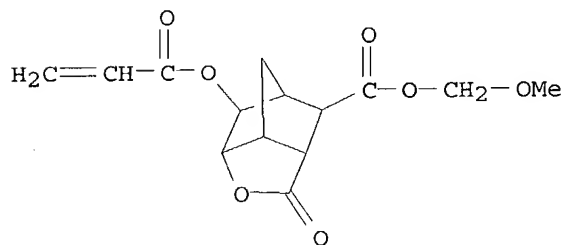
RN 521950-58-3 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methoxymethyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 521950-57-2

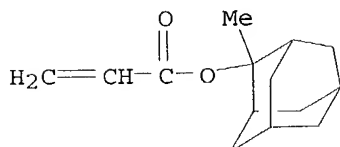
CMF C14 H16 O7



CM 2

CRN 249562-06-9

CMF C14 H20 O2



RN 521950-59-4 CAPLUS

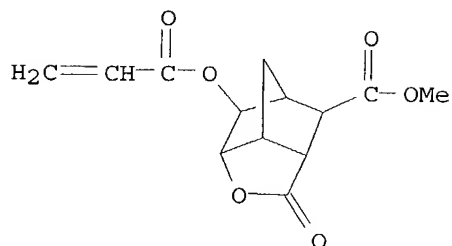
CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

KOROMA EIC1700

CM 1

CRN 449759-66-4

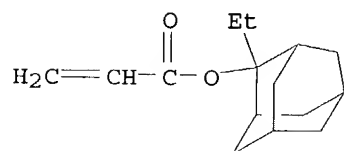
CMF C13 H14 O6



CM 2

CRN 303186-14-3

CMF C15 H22 O2



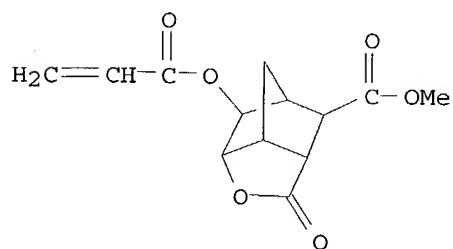
RN 521950-60-7 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with tricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 449759-66-4

CMF C13 H14 O6

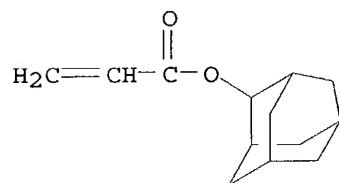


KOROMA EIC1700

CM 2

CRN 128756-71-8

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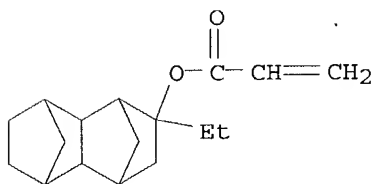
RN 521950-62-9 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 521950-61-8

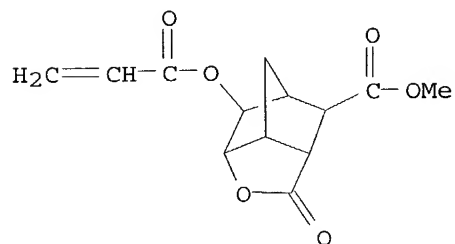
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CM 2

CRN 449759-66-4

CMF C13 H14 O6



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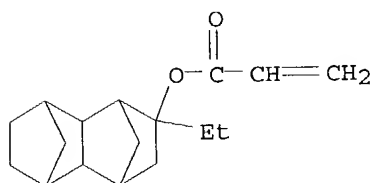
KOROMA EIC1700

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl 2-propenoate and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 521950-61-8

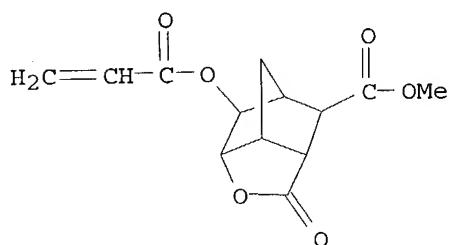
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CM 2

CRN 449759-66-4

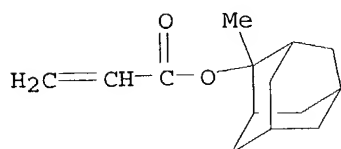
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CM 3

CRN 249562-06-9

CMF C14 H20 O2



RN 521950-64-1 CAPLUS

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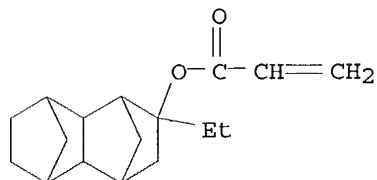
KOROMA EIC1700

oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl 2-propenoate and 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 521950-61-8

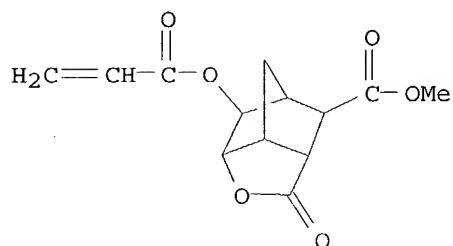
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CM 2

CRN 449759-66-4

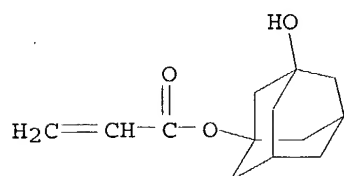
CMF C13 H14 O6



CM 3

CRN 216581-76-9

CMF C13 H18 O3



RN 521950-65-2 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-

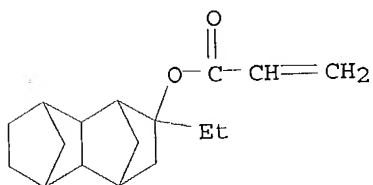
KOROMA EIC1700

oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl 2-propenoate, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-propenoate and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 521950-61-8

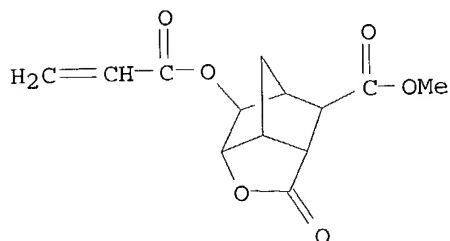
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CM 2

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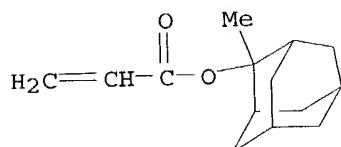
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CM 3

CRN 249562-06-9

CMF C14 H20 O2

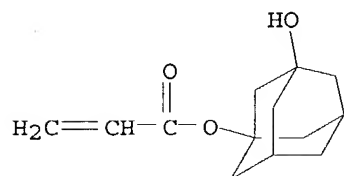


CM 4



CRN 216581-76-9

CMF C13 H18 O3



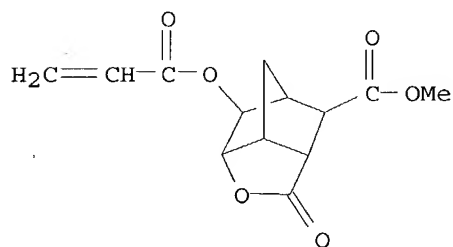
RN 521950-66-3 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2,5-furandione and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 449759-66-4

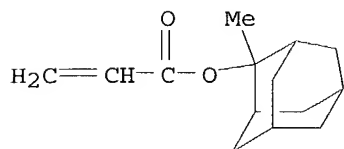
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CM 2

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CMF C14 H20 O2

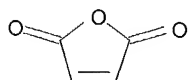


CM 3

CRN 108-31-6

KOROMA EIC1700

CMF C4 H2 O3



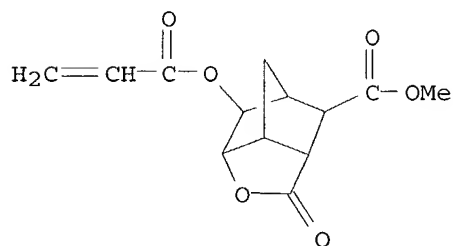
RN 521950-67-4 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-2-oxo-6-[(1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2,5-furandione, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-propenoate and spiro[bicyclo[2.2.1]hept-5-ene-2,3'-(2'H)-furan]-5'-(4'H)-one (9CI) (CA INDEX NAME)

CM 1

CRN 449759-66-4

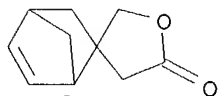
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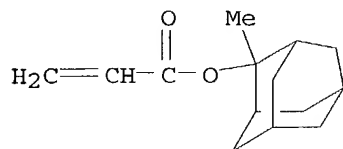
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CM 3

CRN 249562-06-9

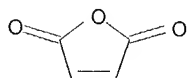
CMF C14 H20 O2



CM 4

CRN 108-31-6

CMF C4 H2 O3



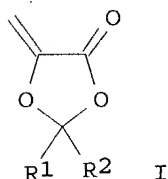
IC ICM G03F007-038  
ICS G03F007-38; G03F007-40  
NCL 430270100; 430330000; 430296000; 430910000  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38  
ST electron beam UV polymer resist compn lithog photolithog  
IT Photoresists  
(polymer and resist compn. for deep-UV and electron beam  
patterning process)  
IT 521950-55-0P 521950-56-1P 521950-58-3P  
521950-59-4P 521950-60-7P 521950-62-9P  
521950-63-0P 521950-64-1P 521950-65-2P  
521950-66-3P 521950-67-4P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(polymer and resist compn. for deep-UV and electron  
beam patterning process)  
IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 144317-44-2,  
Triphenylsulfonium nonafluorobutanesulfonate 211919-60-7,  
Trismethoxymethoxyethylamine  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polymer and resist compn. for deep-UV and electron beam  
patterning process)  
IT 108-94-1, Cyclohexanone, uses 84540-57-8, Propylene glycol methyl ether  
acetate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; polymer and resist compn. for deep-UV and electron beam  
patterning process)

L30 ANSWER 4 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2003:335095 CAPLUS

KOROMA EIC1700

DOCUMENT NUMBER: 138:346489  
 TITLE: 5-Methylene-1,3-dioxolan-4-one derivatives, process  
 for their production, polymers of the derivatives,  
 resist compositions, and **pattern** formation  
**process**  
 INVENTOR(S): Ansai, Ryuichi; Kamon, Yoshihiro; Fujiwara, Tadayuki;  
 Kuwano, Hideaki; Ootake, Atsushi; Momose, Hikaru  
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 169 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003035637	A1	20030501	WO 2002-JP10938	20021022
W: JP, KR, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
CN 1413992	A	20030430	CN 2002-146580	20021022
PRIORITY APPLN. INFO.:			JP 2001-324824	A 20011023
			JP 2002-6354	A 20020115
			JP 2002-159847	A 20020531
			JP 2002-225066	A 20020801
OTHER SOURCE(S):		MARPAT 138:346489		
GI				



AB The invention relates to 5-Methylene-1,3-dioxolan-4-one derivs.  
 represented by the general formula I, which are novel monomers capable of  
 giving homo- and co-polymers excellent in light transmission and thermal  
 stability. Polymers obtained by (co)polymg. a monomer compn. contg. a  
 deriv. represented by the general formula I ( R1 = bridged cyclic  
 hydrocarbon group having 4-16 carbon atoms, etc.; R2 = H, etc.) are  
 excellent in resist performances such as sensitivity, resoln. and dry  
 etching resistance, and soly. in org. solvents and are reduced in line  
 edge roughness, thus being useful as resins for resist compns.

IT 518050-79-8P 518050-80-1P 518050-81-2P  
 518052-05-6P 518052-06-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)

(polymer in resist compn.)

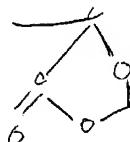
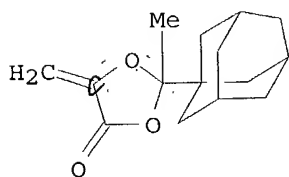
RN 518050-79-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-methyl-5-methylene-2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-1,3-  
dioxolan-4-one and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 518050-72-1

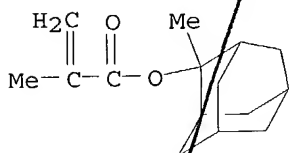
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CM 2

CRN 177080-67-0

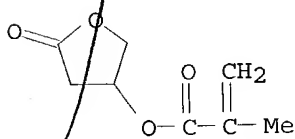
CMF C15 H22 O2



CM 3

CRN 130224-95-2

CMF C8 H10 O4



RN 518050-80-1 CAPLUS

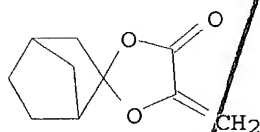
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 5'-methylenespiro[bicyclo[2.2.1]heptane-2,2'-[1,3]dioxolan]-

4'-one and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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CRN 518050-78-7

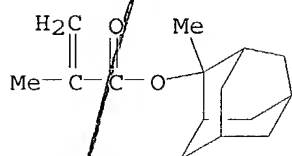
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CM 2

CRN 177080-67-0

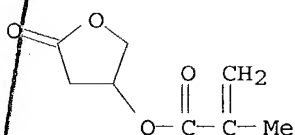
CMF C15 H22 O2



CM 3

CRN 130224-95-2

CMF C8 H10 O4



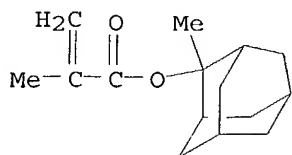
RN 518050-81-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl ester, polymer with 3-methylene-1,4-dioxaspiro[4.5]decan-2-one and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

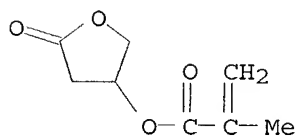
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CM 2

CRN 130224-95-2

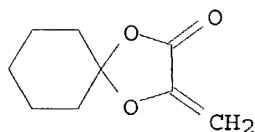
CMF C8 H10 O4



CM 3

CRN 94034-57-8

CMF C9 H12 O3



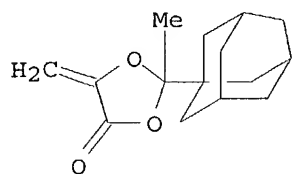
RN 518052-05-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with 2-methyl-5-methylene-2-tricyclo[3.3.1.13,7]dec-1-yl-1,3-dioxolan-4-one and octahydro-1(or 3)-oxo-4,7-methanoisobenzofuran-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 518050-72-1

CMF C15 H20 O3

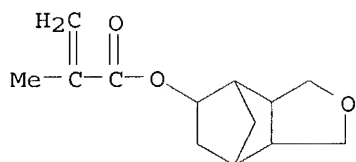


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CRN 436852-34-5

CMF C13 H16 O4

CCI IDS

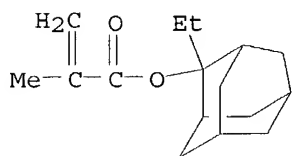


D2=O

CM 3

CRN 209982-56-9

CMF C16 H24 O2



RN 518052-06-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3]dec-2-yl ester,  
polymer with dihydro-5,5-dimethyl-3-methylene-2(3H)-furanone,  
2-methyl-5-methylene-2-tricyclo[3.3.1.1.3]dec-1-yl-1,3-dioxolan-4-one and  
octahydro-1(or 3)-oxo-4,7-methanoisobenzofuran-5-yl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

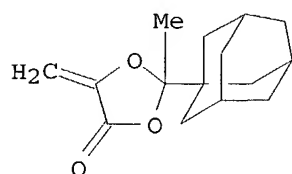
CM 1

CRN 518050-72-1

KOROMA EIC1700



CMF C15 H20 O3

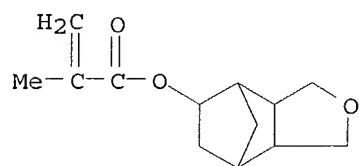


CM 2

CRN 436852-34-5

CMF C13 H16 O4

CCI IDS

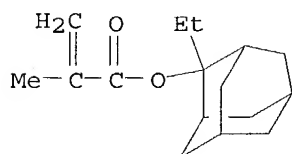


D2=O

CM 3

CRN 209982-56-9

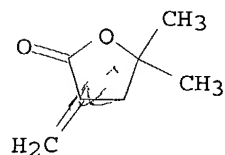
CMF C16 H24 O2



CM 4

CRN 29043-97-8

CMF C7 H10 O2

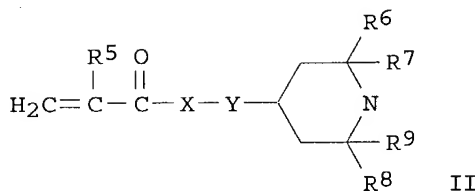
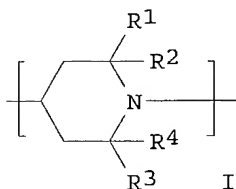


IC ICM C07D317-34  
ICS C07D317-72; C08F220-10; C08F224-00  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35  
ST polymer resist compn  
IT Photoresists  
(5-methylene-1,3-dioxolan-4-one derivs., process for their  
prodn., polymers of derivs., resist compns., and **pattern**  
formation **process**)  
IT 128-08-5, N-Bromosuccinimide 518050-70-9 518050-73-2 518050-76-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(monomer for polymer in resist compn.)  
IT 518050-71-0P 518050-72-1P 518050-74-3P 518050-75-4P 518050-77-6P  
518050-78-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer for polymer in resist compn.)  
IT 518050-79-8P 518050-80-1P 518050-81-2P  
518052-05-6P 518052-06-7P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(polymer in **resist compn.**)  
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 5 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2003:300757 CAPLUS  
DOCUMENT NUMBER: 138:311577  
TITLE: Negative photopolymer compositions, photosensitive  
elements involving resist layers of the compositions,  
their patterning, and fabrication of printed wiring  
boards thereof  
INVENTOR(S): Aoki, Tomoaki; Ootomo, Satoshi; Kajiwara, Takuya  
PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003114521 A2 20030418 JP 2002-113572 20020416  
 PRIORITY APPLN. INFO.: JP 2001-237019 A 20010803  
 GI



AB The compns., having good producibility, developability, and adhesion strength contain (A) binder polymers, (B) photopolymerizable compds. bearing .gtoreq.1 polymerizable ethylenically unsatd. bonds, (C) photopolymn. initiators, and (D) hinderedamines as thermal stabilizers. Preferably, D have piperidine backbones represented by general formula I (R1-R4 = C1-20 alkyl), more preferably, II (R5 = H, Me; X = O, NH; Y = C0-10 alkylene, C2-6 alkyleneoxy; R10 = C1-20 alkyl; R6-R9 = C1-20 alkyl). Preferably, C comprises 2,4,5-triarylimidazole dimer or its derivs. The photosensitive elements comprise supports disposed thereon resist layers of the compns, and optionally protection films. Resist patterns are formed by (i) laminating resist layers on substrates, (ii) imagewise irradiation of actinic ray for photocure of the irradiated sites of the resist layers, and (iii) development and selective removal of unirradiated sites of the resist layers. Printed wiring boards (PWB) are manufd. by (i) laminating the resist layers on layers to be processed and disposed on substrates, (ii) imagewise irradiation of actinic ray for photocure of the irradiated sites of the resist layers, (iii) development and selective removal of unirradiated sites of the resist layers, and (iv) (selective) etching of the layers to be **processed** by using the resist **patterns** as masks. Preferably, the lamination step (i) in formation of resist patterns and PWB fabrication is done by bringing the resist layers of the photosensitive elements in tight adhesion with the substrates.

IT 28263-96-9, Ethyl acrylate-methacrylic acid-methyl methacrylate-styrene copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(binder; neg. photopolymer **compns.** for **resists**, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)

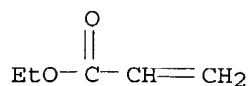
RN 28263-96-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, ethyl 2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5

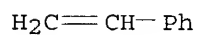
CMF C5 H8 O2



CM 2

CRN 100-42-5

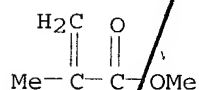
CMF C8 H8



CM 3

CRN 80-62-6

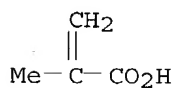
CMF C5 H8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



IT 41637-38-1, BPE 500 50974-47-5, Light Acrylate NP 8EA

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

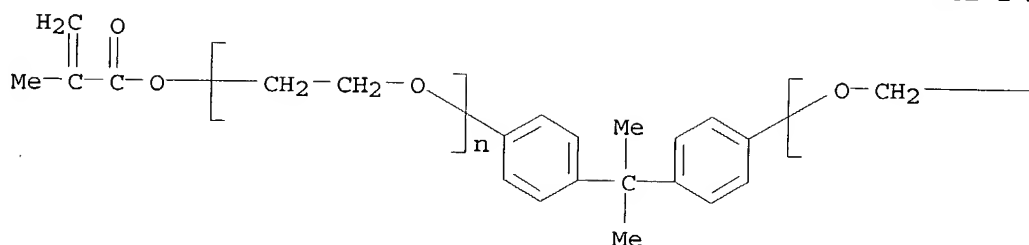
(neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)

RN 41637-38-1 CAPLUS

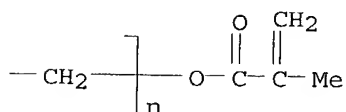
CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

KOROMA EIC1700

PAGE 1-A

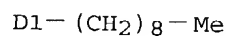
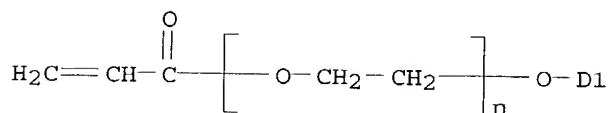


PAGE 1-B



RN 50974-47-5 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propenyl)-.omega.-(nonylphenoxy)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS C08F002-44; C08F291-00; H05K003-06; H05K003-18

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST neg photoresist compn hinderedamine thermal stabilizer; printed circuit board manuf neg photoresist

IT Epoxy resins, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(glass fiber-reinforced; neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)

KOROMA EIC1700

- IT Amines, reactions  
RL: MOA (Modifier or additive use); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(hindered, ethylenically unsatd. group-contg., thermal stabilizers; neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT Amines, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(hindered, thermal stabilizer; neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT Heat stabilizers  
(hindered amines; neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT Negative photoresists  
Printed circuits  
(neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT Polyesters, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(support film; neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT 28263-96-9, Ethyl acrylate-methacrylic acid-methyl methacrylate-styrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder; neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 6143-80-2, 2-(o-Chlorophenyl)-4,5-diphenylimidazole dimer  
RL: CAT (Catalyst use); USES (Uses)  
(neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT 41637-38-1, BPE 500 50974-47-5, Light Acrylate NP 8EA 52496-08-9, NK Ester APG 400  
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT 148195-40-8, MCL-E 61  
RL: TEM (Technical or engineered material use); USES (Uses)  
(neg. photopolymer compns. for resists, their photosensitive elements, patterning of resists, and fabrication of printed wiring boards thereof)
- IT 25038-59-9, GS 16, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(support film; neg. photopolymer compns. for resists, their  
photosensitive elements, patterning of resists, and fabrication of  
printed wiring boards thereof)

IT 52829-07-9, Sanol LS 770

RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(thermal stabilizer; neg. photopolymer compns. for resists, their  
photosensitive elements, patterning of resists, and fabrication of  
printed wiring boards thereof)

IT 68548-08-3, Fancryl FA 711MM

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
(Reactant or reagent); USES (Uses)  
(thermal stabilizer; neg. photopolymer compns. for resists, their  
photosensitive elements, patterning of resists, and fabrication of  
printed wiring boards thereof)

L30 ANSWER 6 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:118461 CAPLUS

DOCUMENT NUMBER: 138:161086

TITLE: Polymers, resist compositions and **patterning  
process**

INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Kawai, Yoshio; Sasago,  
Masaru; Endo, Masayuki; Kishimura, Shinji; Ootani,  
Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda,  
Kazuhiko

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 24 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003031953	A1	20030213	US 2002-178638	20020625
JP 2003082030	A2	20030319	JP 2002-182417	20020624

PRIORITY APPLN. INFO.: JP 2001-190630 A 20010625

AB A ternary copolymer comprising units of .alpha.-trifluoro-methylacrylic  
carboxylate having acid labile groups substituted thereon, units of  
.alpha.-trifluoromethylacrylic carboxylate having adhesive groups  
substituted thereon, and units of styrene having hexafluoroalc. pendants  
is highly transparent to VUV radiation and resistant to plasma etching. A  
resist compn. using the polymer as a base resin is sensitive to  
high-energy radiation below 200 nm, has excellent sensitivity, and is  
suited for lithog. microprocessing.

IT 496861-42-8P 496861-43-9P 496861-44-0P  
496861-45-1P 496861-47-3P 496861-48-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(photoresist compns. for patterning)

process contg.)

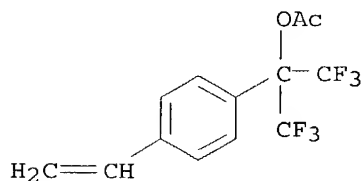
RN 496861-42-8 CAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate and tetrahydro-2-oxo-3-furanyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 496861-41-7

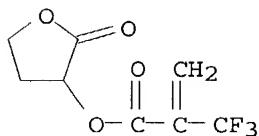
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CM 2

CRN 357294-11-2

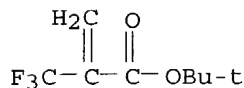
CMF C8 H7 F3 O4



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



RN 496861-43-9 CAPLUS

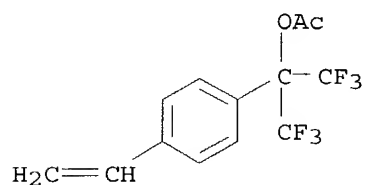
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate and 2-hydroxyethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

KOROMA EIC1700



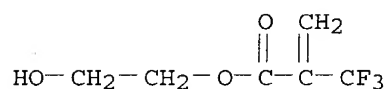
CM 1

CRN 496861-41-7  
CMF C13 H10 F6 O2



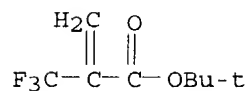
CM 2

CRN 450358-94-8  
CMF C6 H7 F3 O3



CM 3

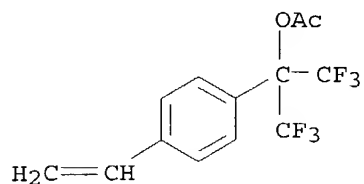
CRN 105935-24-8  
CMF C8 H11 F3 O2



RN 496861-44-0 CAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer  
with 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate  
and hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl  
2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

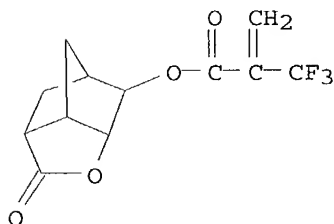
CM 1

CRN 496861-41-7  
CMF C13 H10 F6 O2



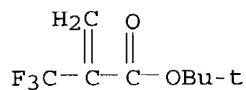
CM 2

CRN 479084-29-2  
CMF C12 H11 F3 O4



CM 3

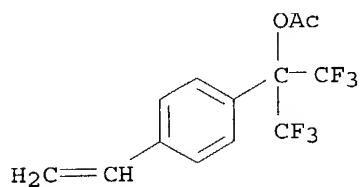
CRN 105935-24-8  
CMF C8 H11 F3 O2



RN 496861-45-1 CAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate and hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

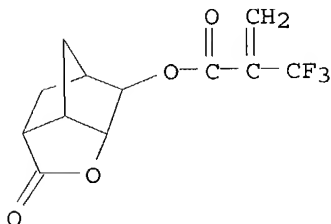
CM 1

CRN 496861-41-7  
CMF C13 H10 F6 O2



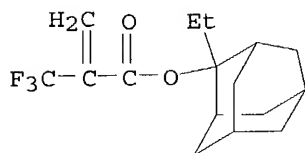
CM 2

CRN 479084-29-2  
CMF C12 H11 F3 O4



CM 3

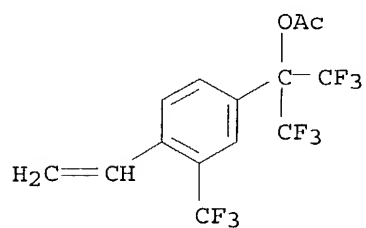
CRN 444168-44-9  
CMF C16 H21 F3 O2



RN 496861-47-3 CAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester, polymer with 1-[4-ethenyl-3-(trifluoromethyl)phenyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate and hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

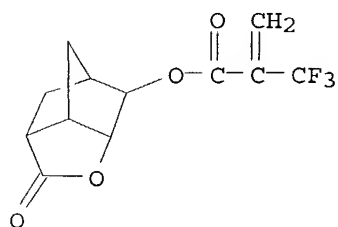
CRN 496861-46-2  
CMF C14 H9 F9 O2



CM 2

CRN 479084-29-2

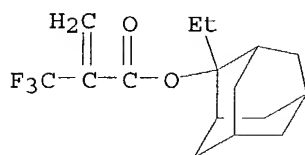
CMF C12 H11 F3 O4



CM 3

CRN 444168-44-9

CMF C16 H21 F3 O2



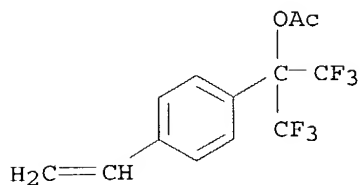
RN 496861-48-4 CAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl acetate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

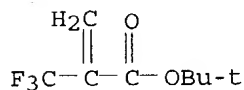
CRN 496861-41-7

CMF C13 H10 F6 O2



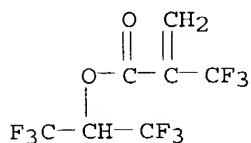
CM 2

CRN 105935-24-8  
CMF C8 H11 F3 O2



CM 3

CRN 91520-41-1  
CMF C7 H3 F9 O2



IC ICM G03F007-038  
ICS G03F007-38; G03F007-40  
NCL 430270100; 430311000; 430330000; 430905000  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST Polymers photoresist compn patterning photolithog  
IT Photolithography  
Photoresists  
(photoresist compns. for **patterning process**)  
IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 3002-18-4  
211919-60-7 449165-34-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(basic compd.; photoresist compns. for **patterning process** contg.)  
IT 139254-88-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inhibitor; photoresist compns. for **patterning**)

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process contg.)

IT 496861-42-8P 496861-43-9P 496861-44-0P  
496861-45-1P 496861-47-3P 496861-48-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)

(photoresist compns. for patterning  
process contg.)

L30 ANSWER 7 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:111387 CAPLUS

DOCUMENT NUMBER: 138:178234

TITLE: Positive-working photoresist composition containing at  
least two acid-sensitive resins of acid-sensitive  
groups

INVENTOR(S): Sato, Kenichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003043690	A2	20030213	JP 2001-236460	20010803

PRIORITY APPLN. INFO.: JP 2001-236460 20010803

AB The title compn. contains .gtoreq.2 resins increasing the soly. towards an  
alkali developer by an acid and a radiation sensitive acid generator,  
wherein each resins has structure [CH<sub>2</sub>-C(R)(-A-COO-ALG)] (R = H, methyl; A  
= single bond, connecting group; ALG = alicyclics, alkyl,  
.alpha.-olefinics, etc.) and different content of the acid-sensitive  
groups. The compn. provides the photoresists of wide **process**  
windows and good **pattern** characteristics regardless of the  
pattern d. and is suitable for semiconductor device fabrication.

IT 312620-52-3 471257-42-8 482609-97-2  
497080-79-2 497080-80-5 497080-81-6  
497080-82-7 497080-85-0 497081-28-4  
497081-29-5

RL: TEM (Technical or engineered material use); USES (Uses)  
(resin; pos.-working **photoresist compn.**)

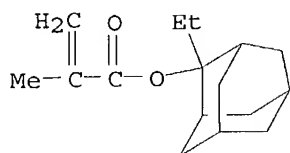
RN 312620-52-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate  
and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 209982-56-9

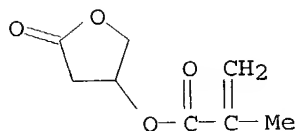
CMF C16 H24 O2



CM 2

CRN 130224-95-2

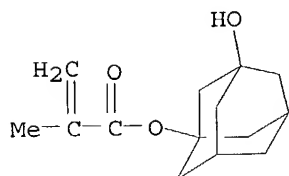
CMF C8 H10 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3



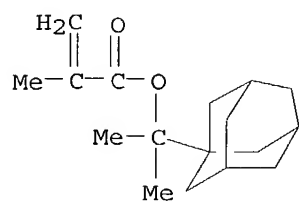
RN 471257-42-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 3,5-dihydroxytricyclo[3.3.1.13,7]dec-1-yl 2-propenoate, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl 2-propenoate and 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 279218-76-7

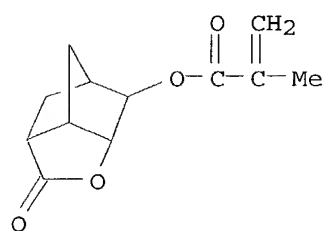
CMF C17 H26 O2



CM 2

CRN 254900-07-7

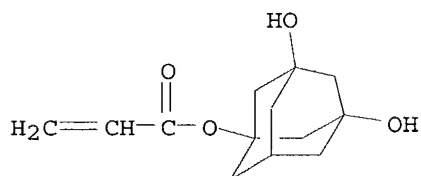
CMF C12 H14 O4



CM 3

CRN 216581-85-0

CMF C13 H18 O4

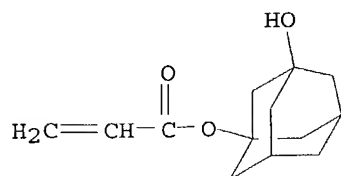


CM 4

CRN 216581-76-9

CMF C13 H18 O3





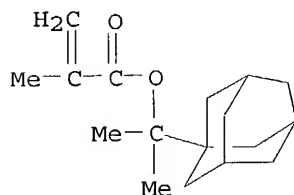
RN 482609-97-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3,5-dihydroxytricyclo[3.3.1.13,7]dec-1-yl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-propenoate and 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 279218-76-7

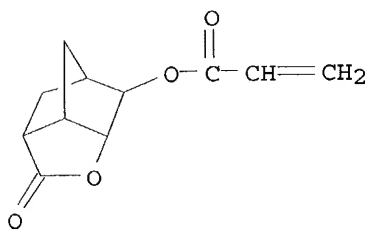
CMF C17 H26 O2



CM 2

CRN 242129-35-7

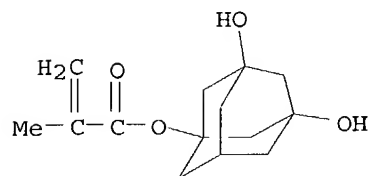
CMF C11 H12 O4



CM 3

CRN 115522-15-1

CMF C14 H20 O4



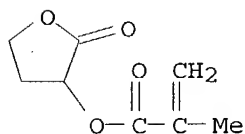
RN 497080-79-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxy-5,7-dimethyltricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 195000-66-9

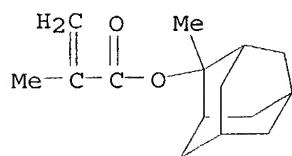
CMF C8 H10 O4



CM 2

CRN 177080-67-0

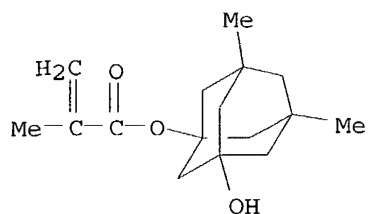
CMF C15 H22 O2



CM 3

CRN 115522-17-3

CMF C16 H24 O3



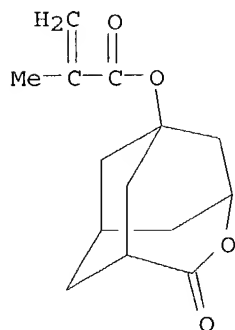
RN 497080-80-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxy-5,7-dimethyltricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 1-methyl-1-tricyclo[3.3.1.13,7]dec-1-ylpropyl 2-propenoate, 7-oxo-6-oxabicyclo[3.2.1]oct-4-yl 2-methyl-2-propenoate and 5-oxo-4-oxatricyclo[4.3.1.13,8]undec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 348596-87-2

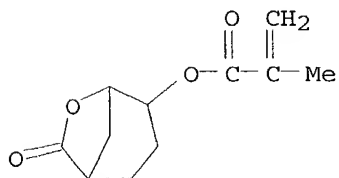
CMF C14 H18 O4



CM 2

CRN 335163-70-7

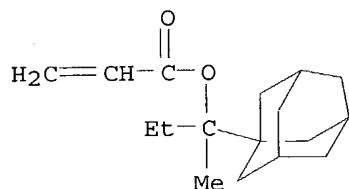
CMF C11 H14 O4



KOROMA EIC1700

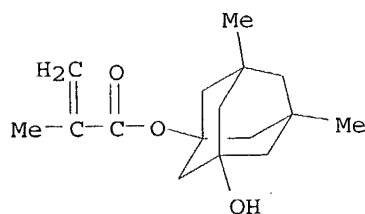
CM 3

CRN 325991-25-1  
CMF C17 H26 O2



CM 4

CRN 115522-17-3  
CMF C16 H24 O3

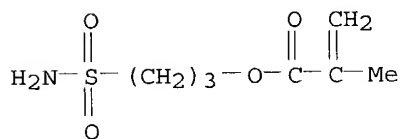


RN 497080-81-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(aminosulfonyl)propyl ester, polymer with  
hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl  
2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

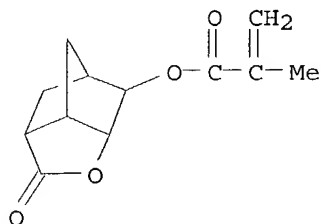
CM 1

CRN 483364-49-4  
CMF C7 H13 N O4 S



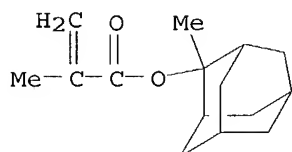
CM 2

CRN 254900-07-7  
CMF C12 H14 O4



CM 3

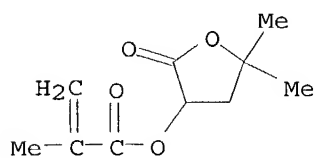
CRN 177080-67-0  
CMF C15 H22 O2



RN 497080-82-7 CAPLUS  
CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with octahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-6-yl 2-methyl-2-propenoate and tetrahydro-5,5-dimethyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

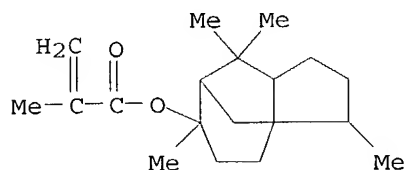
CM 1

CRN 280552-09-2  
CMF C10 H14 O4



CM 2

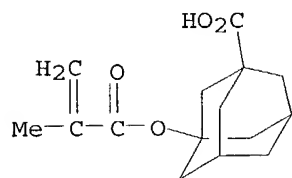
CRN 239096-10-7  
CMF C19 H30 O2



CM 3

CRN 212580-10-4

CMF C15 H20 O4



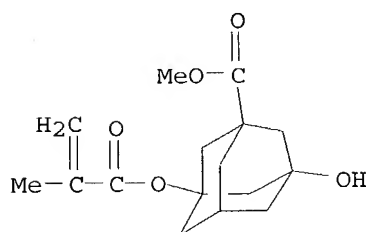
RN 497080-85-0 CAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-hydroxy-5-[(2-methyl-1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 1-(decahydro-1,4:5,8-dimethanonaphthalen-2-yl)-1-methylethyl 2-methyl-2-propenoate and 2-oxo-1-oxaspiro[4.5]dec-3-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 497080-84-9

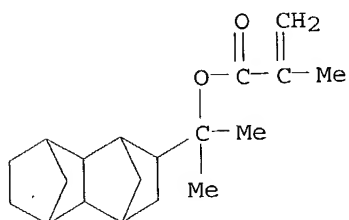
CMF C16 H22 O5



CM 2

CRN 497080-83-8

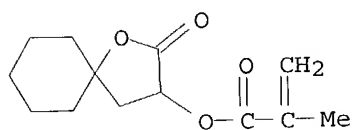
CMF C19 H28 O2



CM 3

CRN 482609-91-6

CMF C13 H18 O4



RN 497081-28-4 CAPLUS

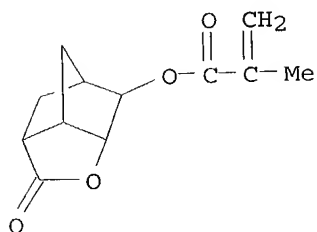
CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-hydroxy-5-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with hexahydromethyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate, 1-methyl-1-(4-methylcyclohexyl)ethyl 2-propenoate and 4-oxotricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 482620-87-1

CMF C13 H16 O4

CCI IDS



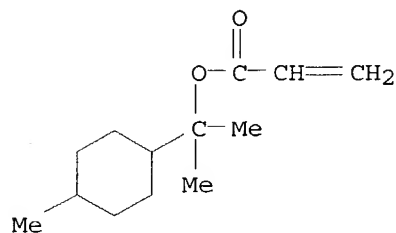
D1-Me

CM 2

KOROMA EIC1700

CRN 342648-11-7

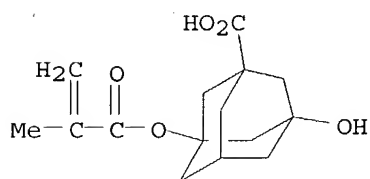
CMF C13 H22 O2



CM 3

CRN 309753-95-5

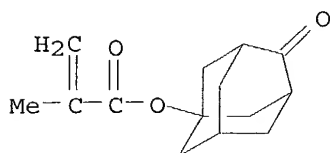
CMF C15 H20 O5



CM 4

CRN 305379-04-8

CMF C14 H18 O3



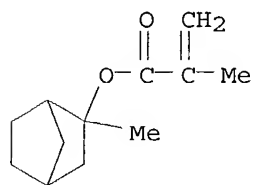
RN 497081-29-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methylbicyclo[2.2.1]hept-2-yl ester,  
polymer with 3-hydroxy-5,7-dimethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-propenoate and methyl-7-oxo-6-oxabicyclo[3.2.1]oct-4-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

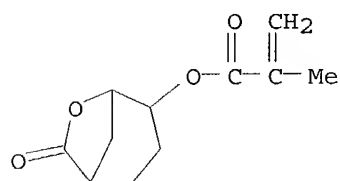


CRN 344614-23-9  
CMF C12 H18 O2



CM 2

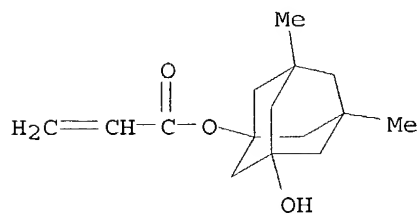
CRN 329364-88-7  
CMF C12 H16 O4  
CCI IDS



D1-Me

CM 3

CRN 216582-11-5  
CMF C15 H22 O3



IC ICM G03F007-039  
ICS C08F020-10; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 76

KOROMA EIC1700

ST pos photoresist compn resin  
 IT Positive photoresists  
 Semiconductor device fabrication  
 (pos.-working photoresist compn.)  
 IT 138529-81-4 144089-15-6 144317-44-2 193345-23-2 241806-75-7  
 258341-99-0 258872-05-8 284474-28-8 301153-78-6 301664-71-1  
 307531-76-6 347193-29-7 347841-51-4 391232-40-9 398141-19-0  
 454471-15-9 454471-23-9  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (acid-generator; pos.-working photoresist compn.)  
 IT 312620-52-3 471257-42-8 482609-97-2  
 497080-79-2 497080-80-5 497080-81-6  
 497080-82-7 497080-85-0 497081-28-4  
 497081-29-5  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (resin; pos.-working photoresist compn.)

L30 ANSWER 8 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:58829 CAPLUS  
 DOCUMENT NUMBER: 138:107615  
 TITLE: Reflection-inhibiting resin composition used in  
 process for forming photoresist  
 pattern  
 INVENTOR(S): Hong, Sung Eun; Jung, Min Ho; Kim, Hyeong Soo; Jung,  
 Jae Chang; Baik, Ki Ho  
 PATENT ASSIGNEE(S): Hynix Semiconductor Inc., S. Korea  
 SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U.S.  
 Ser. No. 627,713.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003018150	A1	20030123	US 2002-189056	20020703
PRIORITY APPLN. INFO.:			KR 1999-31300	A 19990730
			US 2000-627713	A2 20000728

AB A compn. for reducing the light reflection in a photoresist pattern  
 formation comprises (a)  $[\text{CH}_2\text{CR}_1(\text{CO}_2\text{G})]_x(\text{CH}_2\text{CR}_2\text{R}_3)_y$  (G = glycidyl; R1, R2 =  
 H, OH, CH<sub>2</sub>OH, alkyl; R3 = substituted aryl groups; x and y represent the  
 relative amts. of each monomer, wherein the mole ratio of x:y is 0.0 -  
 0.9:0.1 - 1.0), (b) a thermal acid generator, (c) an org. solvent, and  
 optionally (d) a polymer having hydroxyl group as a functional group. The  
 present invention also provides methods for using the above described  
 resin to inhibit reflection of light from the lower layer of a wafer  
 substrate during a photoresist pattern formation process  
 . A compn. contained glycidyl methacrylate-.alpha.-methylstyrene  
 copolymer, polyvinylphenol, and a photoacid generator in propylene glycol  
 Me ether acetate solvent.  
 IT 86249-18-5P, Glycidyl methacrylate-.alpha.-methylstyrene copolymer

260369-03-7P 331622-76-5P 331622-77-6P

488722-36-7P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reflection-inhibiting resin **compn.** used in **process**  
for forming **photoresist pattern**)

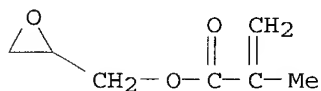
RN 86249-18-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 106-91-2

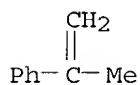
CMF C7 H10 O3



CM 2

CRN 98-83-9

CMF C9 H10



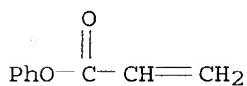
RN 260369-03-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with phenyl  
2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 937-41-7

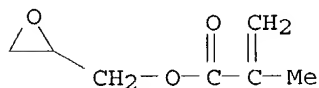
CMF C9 H8 O2



CM 2

CRN 106-91-2

CMF C7 H10 O3



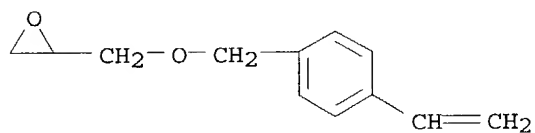
RN 331622-76-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
[[ (4-ethenylphenyl)methoxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 113538-80-0

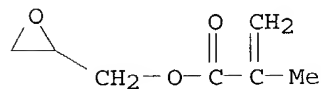
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CM 2

CRN 106-91-2

CMF C7 H10 O3



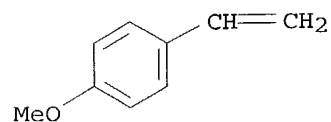
RN 331622-77-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
1-ethenyl-4-methoxybenzene (9CI) (CA INDEX NAME)

CM 1

CRN 637-69-4

CMF C9 H10 O

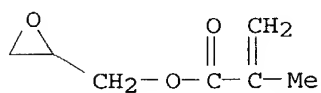


KOROMA EIC1700

CM 2

CRN 106-91-2

CMF C7 H10 O3



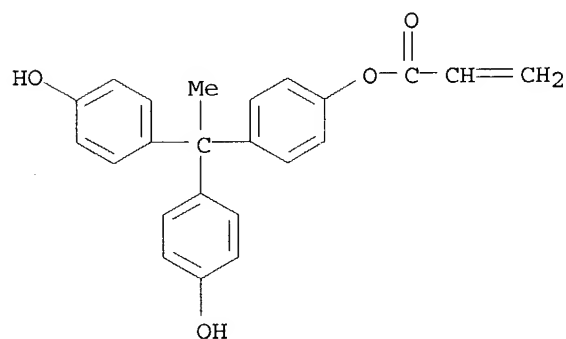
RN 488722-36-7 CAPLUS

CN 2-Propenoic acid, 4-[1,1-bis(4-hydroxyphenyl)ethyl]phenyl ester, polymer with oxiranylmethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 331622-73-2

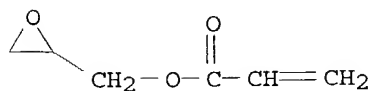
CMF C23 H20 O4



CM 2

CRN 106-90-1

CMF C6 H8 O3



IC ICM C08F004-04

NCL 526219000; 526273000; 526346000; 524228000; 524268000; 524310000;  
524315000; 525182000; 525186000

CC 37-3 (Plastics Manufacture and Processing)

KOROMA EIC1700

Section cross-reference(s): 74

ST photoresist reflection inhibiting resin

IT Photoresists  
(reflection-inhibiting resin compn. used in **process** for forming photoresist **pattern**)

IT 106-91-2P, Glycidyl methacrylate 113538-80-0P 331622-73-2P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(monomer; reflection-inhibiting resin compn. used in **process** for forming photoresist **pattern**)

IT 99835-44-6 335157-24-9 348594-74-1 348594-76-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generator; reflection-inhibiting resin compn. used in **process** for forming photoresist **pattern**)

IT 86249-18-5P, Glycidyl methacrylate-.alpha.-methylstyrene copolymer  
189117-83-7P 260369-03-7P 331622-76-5P  
331622-77-6P 375395-27-0P 488722-36-7P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(reflection-inhibiting resin compn. used in **process** for forming photoresist **pattern**)

IT 59269-51-1, Polyvinyl phenol  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(reflection-inhibiting resin compn. used in **process** for forming photoresist **pattern**)

IT 79-41-4, Methacrylic acid, reactions 106-89-8, Epichlorohydrin, reactions 556-52-5, Glycidol 814-68-6, Acryloyl chloride 1592-20-7, 4-Vinylbenzyl chloride 27955-94-8, 1,1,1-Tris(4-hydroxy phenyl)ethane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reflection-inhibiting resin compn. used in **process** for forming photoresist **pattern**)

L30 ANSWER 9 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:42890 CAPLUS

DOCUMENT NUMBER: 138:115058

TITLE: Resist composition and **patterning process**

INVENTOR(S): Kobayashi, Tomohiro; Nishi, Tsunehiro; Watanabe, Satoshi; Kinsho, Takeshi; Nagura, Shigehiro; Ishihara, Toshinobu

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., USA

SOURCE: U.S. Pat. Appl. Publ., 35 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2003013039	A1	20030116	US 2002-170345	20020614

JP 2003066612 A2 20030305 JP 2002-168143 20020610  
 PRIORITY APPLN. INFO.: JP 2001-181079 A 20010615

AB The present invention relates to a resist compn. comprising a hydrogenated product of ring-opening metathesis polymer and a poly(meth)acrylic acid deriv. as a base resin. The present invention relates to a resist compn. is sensitive to high-energy radiation, has excellent sensitivity, resoln., and etch resistance, and lends itself to micropatterning with electron beams or deep-UV.

IT 195000-69-2P 485818-95-9P 485818-96-0P  
 485818-97-1P 485818-98-2P 485818-99-3P  
 485819-00-9P 485819-01-0P 485819-02-1P  
 485819-04-3P 485819-05-4P 485819-08-7P  
 485819-09-8P 485819-10-1P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoresist compn. and patterning process contg.)

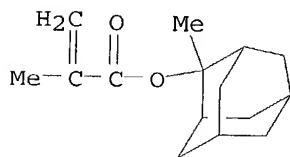
RN 195000-69-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

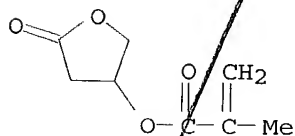
CMF C15 H22 O2



CM 2

CRN 130224-95-2

CMF C8 H10 O4



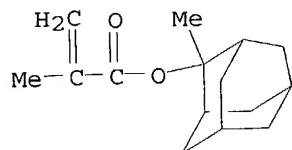
RN 485818-95-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with dihydro-5,5-dimethyl-3-methylene-2(3H)-furanone and

2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA  
INDEX NAME)

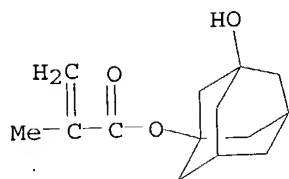
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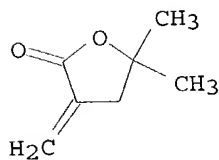
CM 2

CRN 115372-36-6  
CMF C14 H20 O3



CM 3

CRN 29043-97-8  
CMF C7 H10 O2



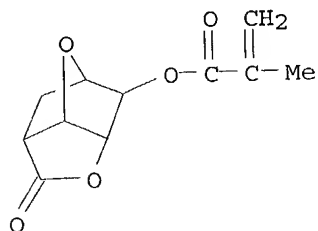
RN 485818-96-0 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-  
yl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1



CRN 274248-05-4

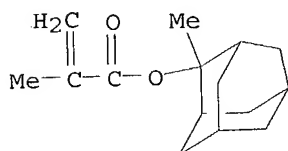
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CM 2

CRN 177080-67-0

CMF C15 H22 O2



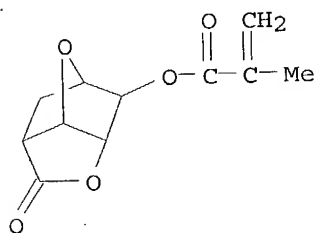
RN 485818-97-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester,  
polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl  
2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.13,7]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 274248-05-4

CMF C11 H12 O5

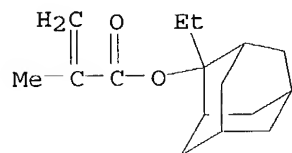


CM 2

CRN 209982-56-9

KOROMA EIC1700

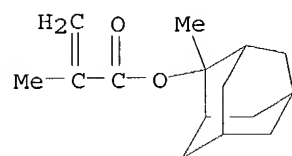
CMF C16 H24 O2



CM 3

CRN 177080-67-0

CMF C15 H22 O2



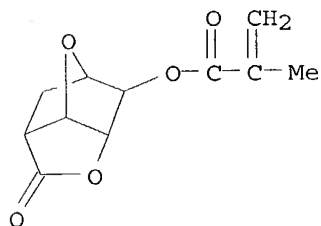
RN 485818-98-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 274248-05-4

CMF C11 H12 O5

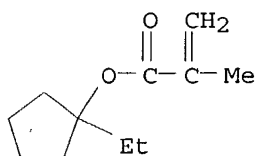


CM 2

CRN 266308-58-1

CMF C11 H18 O2

KOROMA EIC1700



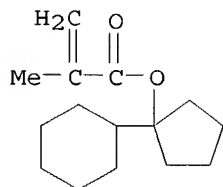
RN 485818-99-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-cyclohexylcyclopentyl ester, polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 366808-98-2

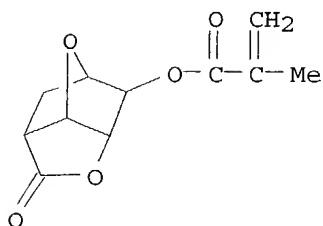
CMF C15 H24 O2



CM 2

CRN 274248-05-4

CMF C11 H12 O5



RN 485819-00-9 CAPLUS

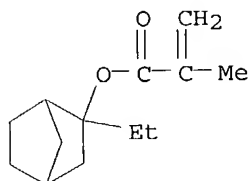
CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 330595-98-7

CMF C13 H20 O2

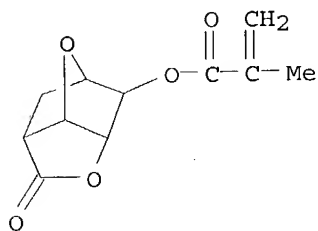
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CM 2

CRN 274248-05-4

CMF C11 H12 O5



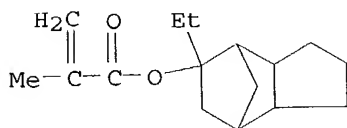
RN 485819-01-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 5-ethyloctahydro-4,7-methano-1H-inden-5-yl  
 ester, polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 348089-09-8

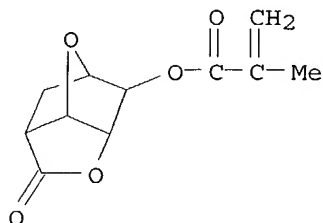
CMF C16 H24 O2



CM 2

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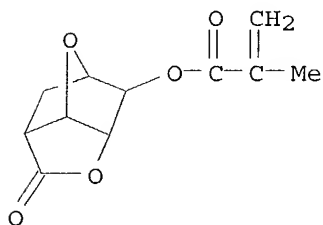
CMF C11 H12 O5



RN 485819-02-1 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester,  
 polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

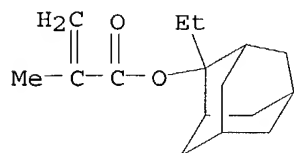
CM 1

CRN 274248-05-4  
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CM 2

CRN 209982-56-9  
 CMF C16 H24 O2

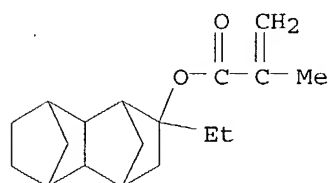


RN 485819-04-3 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-  
 2-yl ester, polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 485819-03-2

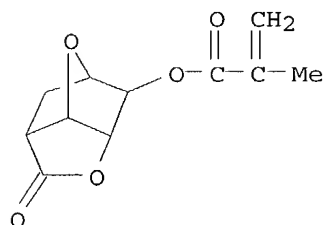
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CM 2

CRN 274248-05-4

CMF C11 H12 O5



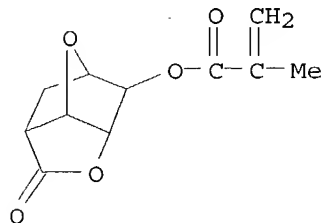
RN 485819-05-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.13,7]dec-2-yl ester,  
polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl  
2-methyl-2-propenoate and 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 274248-05-4

CMF C11 H12 O5

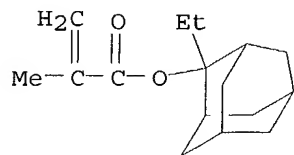


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KOROMA EIC1700

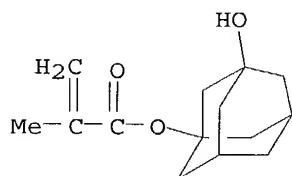
CMF C16 H24 O2



CM 3

CRN 115372-36-6

CMF C14 H20 O3



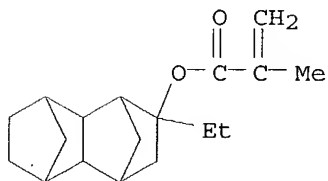
RN 485819-08-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl ester, polymer with hexahydro-5-oxo-2,6-methanofuro[3,2-b]furan-3-yl 2-methyl-2-propenoate and 3-hydroxytricyclo[3.3.1.1.3,7]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 485819-03-2

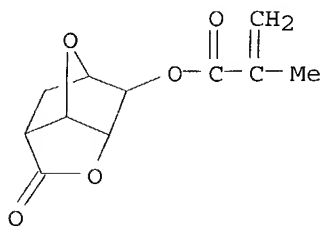
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CM 2

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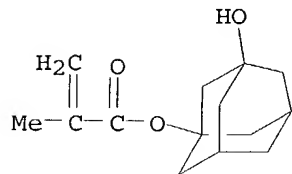
CMF C11 H12 O5



CM 3

CRN 115372-36-6

CMF C14 H20 O3



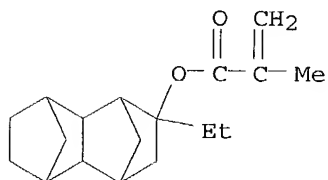
RN 485819-09-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate and 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 485819-03-2

CMF C18 H26 O2

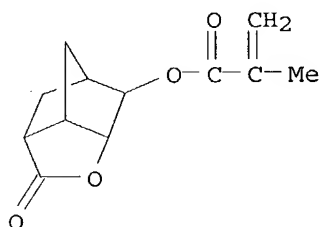


CM 2

CRN 254900-07-7

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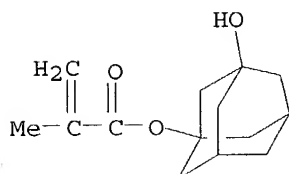




CM 3

CRN 115372-36-6

CMF C14 H20 O3



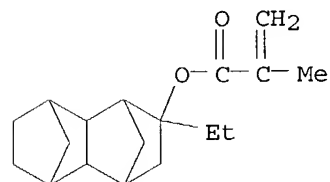
RN 485819-10-1 CAPLUS

CN 3,5-Methano-2H-cyclopenta[b]furan-7-carboxylic acid, hexahydro-6-[(2-methyl-1-oxo-2-propenyl)oxy]-2-oxo-, methyl ester, polymer with 2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl 2-methyl-2-propenoate and 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 485819-03-2

CMF C18 H26 O2

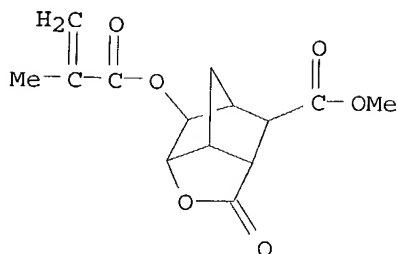


CM 2

CRN 274247-93-7

CMF C14 H16 O6

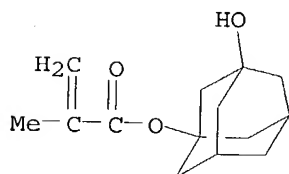
KOROMA EIC1700



CM 3

CRN 115372-36-6

CMF C14 H20 O3



IC ICM G03F007-038  
 NCL 430270100; 430296000; 430330000; 430325000  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 ST photoresist compn patterning photolithog  
 IT Photolithography  
 Photoresists  
 (photoresist compn. and patterning process)  
 IT 195000-69-2P 368872-75-7P 479075-48-4P 485391-25-1P  
 485818-87-9P 485818-88-0P 485818-89-1P 485818-91-5P 485818-93-7P  
 485818-94-8P 485818-95-9P 485818-96-0P  
 485818-97-1P 485818-98-2P 485818-99-3P  
 485819-00-9P 485819-01-0P 485819-02-1P  
 485819-04-3P 485819-05-4P 485819-08-7P  
 485819-09-8P 485819-10-1P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoresist compn. and patterning process contg.)

L30 ANSWER 10 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2003:17554 CAPLUS  
 DOCUMENT NUMBER: 138:98190  
 TITLE: Chemically-amplified negative-working resist compositions for processing with electron beam or

INVENTOR(S): x-ray  
Takahashi, Akira; Shirakawa, Hiroshi; Adegawa, Yutaka  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 57 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003005355	A2	20030108	JP 2001-186705	20010620
PRIORITY APPLN. INFO.:			JP 2001-186705	20010620
OTHER SOURCE(S):			MARPAT 138:98190	
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The compns. comprise (A) compds. generating acids on irradiation with electron beam or x-ray, (B) polymers sol. in aq. alk. solns., and (D) .gtoreq.1 compds. selected from heterocycles defined by 8 Markush structures such as I, II, III, IV, V, and VI (R11 = H, aliph., arom., mixed, or heterocyclic amine, amide, imide, ester, halo, halogen substituted alkyl or aryl, OH, carboxyl, thiol, cyano, nitro, formyl, sulfonyl, sulfonamide, acyl, aroyl, alkyl, alkyloxy, alkenyloxy, heterocyclic, aryl, alkenyl, aralkyl; R12 = H, arom. or heterocyclic amine, halogen-substituted alkyl or aryl, OH, acyl, aroyl, alkyl, alkyloxy, alkenyloxy, heterocyclic, aryl, alkenyl, aralkyl, ester, carbonate ester). The resists have excellent stability against post exposure bake. Resists with high resolution and excellent profiles are obtained.

IT 349647-07-0P, Acrylonitrile-2-hydroxyethyl acrylate-2-[(4'-hydroxyphenyl)carbonyloxy]ethyl methacrylate copolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(Chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile patterns by processing with electron beam or x-ray)

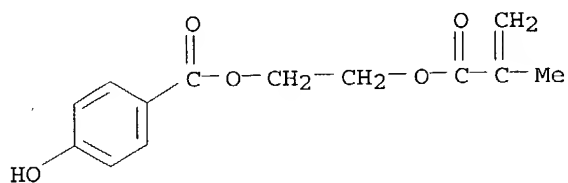
RN 349647-07-0 CAPLUS

CN Benzoic acid, 4-hydroxy-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 2-hydroxyethyl 2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 34573-66-5

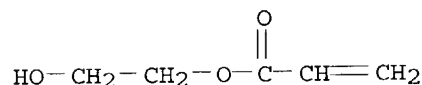
CMF C13 H14 O5



CM 2

CRN 818-61-1

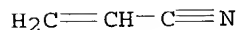
CMF C5 H8 O3



CM 3

CRN 107-13-1

CMF C3 H3 N



IC ICM G03F007-004

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 28

ST chem amplified neg working photoresist electron beam; x ray neg working photoresist; heterocyclic additive neg working photoresist; pteridine deriv additive neg working photoresist

IT Negative photoresists

(chem.-amplified; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 130501-59-6P, 4-Hydroxystyrene homopolymer acetate 173786-80-6DP, 4-Acetoxystyrene-4-methoxystyrene copolymer, hydrolyzed **349647-07-0P**, Acrylonitrile-2-hydroxyethyl acrylate-2-[(4'-hydroxyphenyl)carbonyloxy]ethyl methacrylate copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chem.-amplified neg.-working **resist compns.** contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 110726-28-8, 1-[.alpha.-Methyl-.alpha.-(4-hydroxyphenyl)ethyl]-4-

[.alpha.,.alpha.-bis(4-hydroxyphenyl)ethyl]benzene

RL: RCT (Reactant); RACT (Reactant or reagent)

(chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 146-14-5 146-17-8, Riboflavin 5'-(dihydrogen phosphate) 487-21-8,  
2,4(1H,3H)-Pteridinedione 490-59-5, Benzo[g]pteridine-2,4(1H,3H)-dione  
945-24-4 1005-24-9 1086-80-2 1910-42-5 2236-60-4 24979-69-9  
24979-70-2 24979-74-6 24980-18-5 25535-16-4 28721-76-8  
31722-01-7 86690-04-2 149614-53-9 321164-59-4 345212-27-3  
396098-38-7 437652-81-8 477705-24-1 482636-16-8 482636-17-9  
482636-18-0 482636-19-1

RL: TEM (Technical or engineered material use); USES (Uses)

(chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 162846-57-3P

RL: PNU (Preparation, unclassified); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(crosslinking agent; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 161679-94-3P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(crosslinking agent; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 3089-11-0 32449-09-5 185502-14-1 185502-15-2 197087-74-4

RL: TEM (Technical or engineered material use); USES (Uses)

(crosslinking agent; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

IT 39153-56-5 138529-81-4 138529-84-7 241806-75-7 241806-76-8  
258341-99-0 258872-05-8 312386-77-9 338445-31-1 341548-86-5  
343629-51-6 437652-80-7 482636-20-4

RL: TEM (Technical or engineered material use); USES (Uses)

(photoacid generator; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)

L30 ANSWER 11 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:14489 CAPLUS

DOCUMENT NUMBER: 138:98186

TITLE: Chemically-amplified negative-working resist compositions for processing with electron beam or x-ray

INVENTOR(S): Takahashi, Omote; Shirakawa, Hiroshi; Adegawa, Yutaka

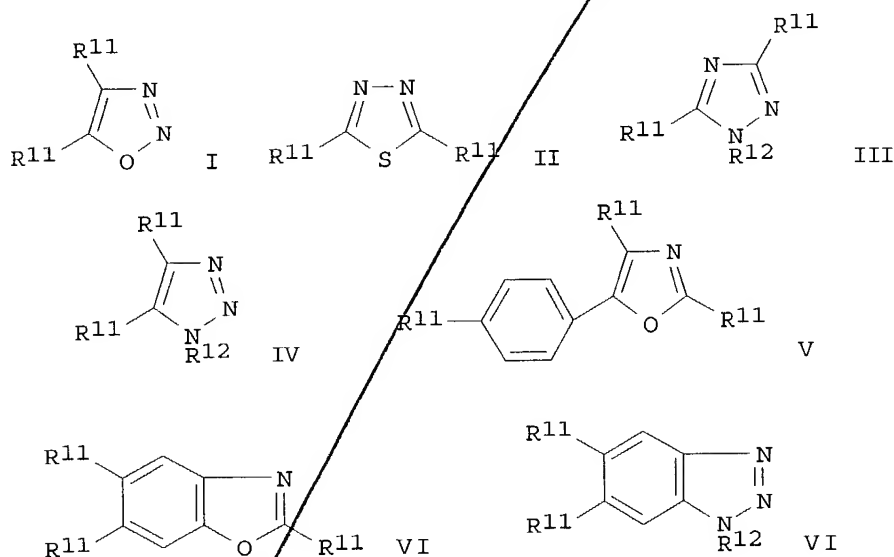
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 57 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003005356	A2	20030108	JP 2001-186786	20010620
PRIORITY APPLN. INFO.:			JP 2001-186786	20010620
OTHER SOURCE(S):		MARPAT 138:98186		
GI				



AB The comps. comprise (A) comps. generating acids on irradiation with electron beam or x-ray, (B) polymers sol. in aq. alk. solns., and (D) .gtoreq.1 comps. selected from heterocycles defined by 9 Markush structures such as I, II, III, IV, V, VI, and VII (R11 = H, aliph., arom., mixed, or heterocyclic amine, amide, imide, ester, halo, halogen substituted alkyl or aryl, OH, carboxyl, thiol, cyano, nitro, formyl, sulfonyl, sulfonamide, acyl, aroyl, alkyl, alkyloxy, alkenyloxy, heterocyclic, aryl, alkenyl, aralkyl; R12 = H, arom. or heterocyclic amine, halogen-substituted alkyl or aryl, OH, acyl, aroyl, alkyl, alkyloxy, alkenyloxy, heterocyclic, aryl, alkenyl, aralkyl, ester, carbonate ester). The resists have excellent stability against post exposure bake. Resists with high resolu. and excellent profiles are obtained.

IT 349647-07-0P, Acrylonitrile-2-hydroxyethyl acrylate-2-[(4'-hydroxyphenyl)carbonyloxy]ethyl methacrylate copolymer  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chem.-amplified neg.-working **resist compns.** contg.  
heterocyclic compds. for obtaining fine profile **patterns** by  
**processing** with electron beam or x-ray)

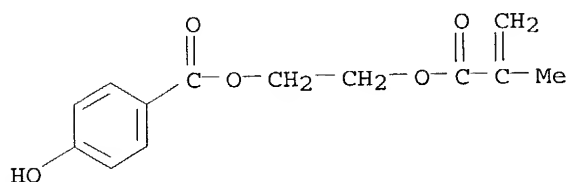
RN 349647-07-0 CAPLUS

CN Benzoic acid, 4-hydroxy-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester,  
polymer with 2-hydroxyethyl 2-propenoate and 2-propenenitrile (9CI) (CA  
INDEX NAME)

CM 1

CRN 34573-66-5

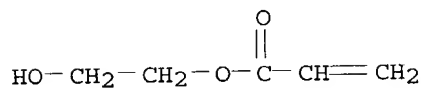
CMF C13 H14 O5



CM 2

CRN 818-61-1

CMF C5 H8 O3



CM 3

CRN 107-13-1

CMF C3 H3 N



IC ICM G03F007-004

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 28

ST chem amplified neg working photoresist electron beam; x ray neg working  
photoresist; triazole additive neg working photoresist; heterocyclic  
additive neg working photoresist

KOROMA EIC1700

- IT Negative photoresists  
(chem.-amplified; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 130501-59-6P, 4-Hydroxystyrene homopolymer acetate 173786-80-6DP, 4-Acetoxystyrene-4-methoxystyrene copolymer, hydrolyzed **349647-07-0P**, Acrylonitrile-2-hydroxyethyl acrylate-2-[(4'-hydroxyphenyl)carbonyloxy]ethyl methacrylate copolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 110726-28-8, 1-[(.alpha.-Methyl-.alpha.-(4-hydroxyphenyl)ethyl]-4-[(.alpha.,.alpha.-bis(4-hydroxyphenyl)ethyl]benzene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 92-71-7 1806-34-4 3073-87-8 3147-75-9 3864-99-1 4184-79-6  
7128-64-5 17472-96-7 24979-69-9 24979-70-2 24979-74-6 24980-18-5  
28539-02-8, 1H-Benzotriazole-1-methanol 148044-19-3 149614-53-9  
150405-69-9 321164-59-4 345212-27-3 396098-38-7 477705-24-1  
482654-95-5 482654-96-6 482654-97-7 482654-98-8 482654-99-9  
482655-00-5 482655-01-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 162846-57-3P  
RL: PNU (Preparation, unclassified); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(crosslinking agent; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 161679-94-3P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinking agent; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 3089-11-0 32449-09-5 185502-14-1 185502-15-2 197087-74-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(crosslinking agent; chem.-amplified neg.-working resist compns. contg. heterocyclic compds. for obtaining fine profile **patterns** by **processing** with electron beam or x-ray)
- IT 39153-56-5 138529-81-4 138529-84-7 241806-75-7 241806-76-8  
258341-99-0 258872-05-8 312386-77-9 338445-31-1 341548-86-5  
343629-51-6 437652-80-7 437652-81-8 482636-20-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generator; chem.-amplified neg.-working resist compns.



contg. heterocyclic compds. for obtaining fine profile patterns  
by processing with electron beam or x-ray)

L30 ANSWER 12 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:978379 CAPLUS

DOCUMENT NUMBER: 138:63824

TITLE: Polymers, resist compositions and patterning  
process, novel tetrahydrofuran compounds and  
their preparation

INVENTOR(S): Nishi, Tsunehiro; Kinsho, Takeshi; Tachibana,  
Seichiro; Watanabe, Takeru; Hasegawa, Koji;  
Kobayashi, Tomohiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd. Japan

SOURCE: U.S. Pat. Appl. Publ., 40 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

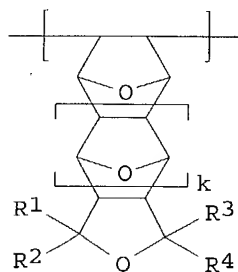
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

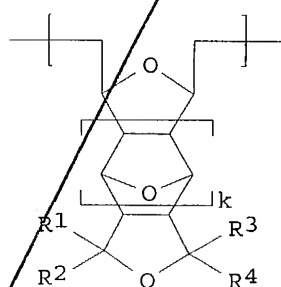
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002197559	A1	20021226	US 2002-126877	20020422
JP 2003034706	A2	20030207	JP 2002-113252	20020416
PRIORITY APPLN. INFO.:			JP 2001-124126	A 20010423
			JP 2001-124137	A 20010423

GI



I



II

AB A polymer comprises recurring units of formula I or II (R1-4 = H, alkyl;  
or R1,2, and R3,4 taken together may form a ring with each pair being  
alkylene; k = 0, 1) and having a Mw of 1,000-500,000. A resist compn.  
comprising the polymer as a base resin is sensitive to high-energy  
radiation, has excellent sensitivity, resolu., etching resistance, and  
minimized swell and lends itself to micropatterning with electron beams or  
deep-UV.

IT 479075-47-3P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photoresist compns. and patterning

process contg. novel THF polymer)

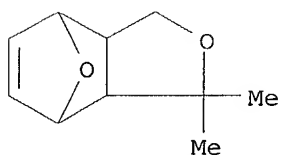
RN 479075-47-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2,5-furandione and 1,3,3a,4,7,7a-hexahydro-1,1-dimethyl-4,7-epoxyisobenzofuran (9CI) (CA INDEX NAME)

CM 1

CRN 479075-38-2

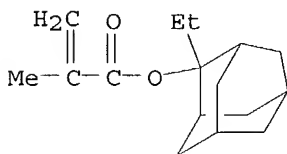
CMF C10 H14 O2



CM 2

CRN 209982-56-9

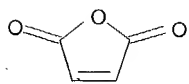
CMF C16 H24 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-038

ICS C08G065-34; G03F007-38; G03F007-40

NCL 430270100; 528425000; 528271000; 525088000; 525165000; 430296000; 430330000; 430311000

KOROMA EIC1700

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

ST photoresist compn patterning THF compd synthesis

IT Photoresists  
 (photoresist compns. and **patterning process** contg.  
 novel THF polymer)

IT 479075-39-3P 479075-41-7P 479075-42-8P 479075-44-0P 479075-45-1P  
 479075-46-2P 479075-47-3P 479075-48-4P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoresist compns. and **patterning process** contg. novel THF polymer)

IT 470722-61-3P 479075-38-2P 479075-40-6P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of novel THF compd. for photoresist compns. and **patterning process**)

IT 98-59-9, p-Toluenesulfonyl chloride 72081-09-5 115888-24-9  
 479075-51-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of novel THF compd. for photoresist compns. and **patterning process**)

IT 479075-49-5P 479075-50-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of novel THF compd. for photoresist compns. and **patterning process**)

L30 ANSWER 13 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:794185 CAPLUS

DOCUMENT NUMBER: 137:317926

TITLE: Polymer, resist composition and **patterning process**

INVENTOR(S): Nishi, Tsunehiro; Nakashima, Mutsuo; Tachibana, Seiichiro; Funatsu, Kenji

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 38 pp.  
 CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002150835	A1	20021017	US 2002-73223	20020213
JP 2002317016	A2	20021031	JP 2002-21562	20020130
PRIORITY APPLN. INFO.:			JP 2001-37247	A 20010214
			JP 2001-37262	A 20010214
			JP 2001-37271	A 20010214

AB A novel polymer is obtained by copolymg. a (meth)acrylic acid deriv. with

a vinyl ether compd., an allyl ether compd. and an oxygen-contg. alicyclic olefin compd. A photoresist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity, resolu., etching resistance, and minimized swell and lends itself to micropatterning with electron beams or deep-UV.

IT 470722-46-4P 470722-47-5P 470722-48-6P  
470722-49-7P 470722-50-0P 470722-51-1P  
470722-52-2P 470722-53-3P 470722-54-4P  
470722-55-5P 470722-56-6P 470722-57-7P  
470722-59-9P 470722-60-2P 470722-62-4P  
470722-64-6P 470722-65-7P 470722-66-8P  
470722-67-9P 470722-68-0P 470722-69-1P  
470722-70-4P 470722-71-5P 470722-72-6P  
470722-73-7P 470722-74-8P 470722-75-9P  
470722-76-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymer for photoresist compn. and patterning process)

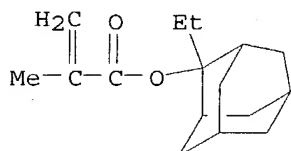
RN 470722-46-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

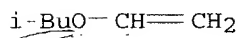
CMF C16 H24 O2



CM 2

CRN 109-53-5

CMF C6 H12 O



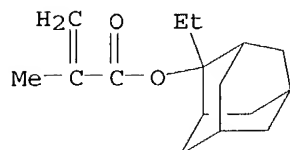
RN 470722-47-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

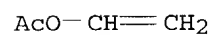
KOROMA EIC1700

CRN 209982-56-9  
CMF C16 H24 O2



CM 2

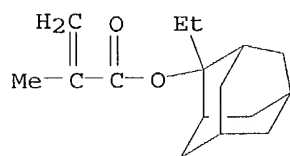
CRN 108-05-4  
CMF C4 H6 O2



RN 470722-48-6 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with (ethenyloxy)cyclohexane (9CI) (CA INDEX NAME)

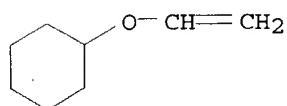
CM 1

CRN 209982-56-9  
CMF C16 H24 O2



CM 2

CRN 2182-55-0  
CMF C8 H14 O



RN 470722-49-7 CAPLUS

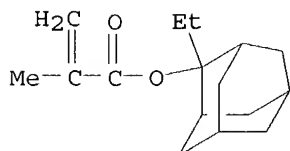
KOROMA EIC1700

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2,3-dihydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

CMF C16 H24 O2



CM 2

CRN 1191-99-7

CMF C4 H6 O



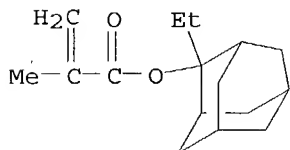
RN 470722-50-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 3,4-dihydro-2H-pyran (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

CMF C16 H24 O2



CM 2

CRN 110-87-2

CMF C5 H8 O



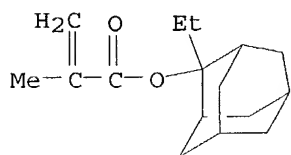
RN 470722-51-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-ethoxy-3,4-dihydro-2H-pyran (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

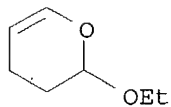
CMF C16 H24 O2



CM 2

CRN 103-75-3

CMF C7 H12 O2



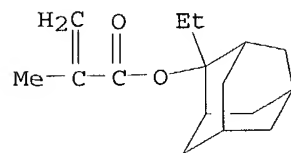
RN 470722-52-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

CMF C16 H24 O2

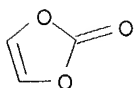


KOROMA EIC1700

CM 2

CRN 872-36-6

CMF C3 H2 O3



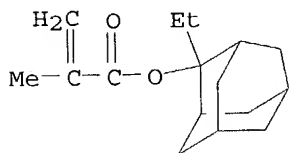
RN 470722-53-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-methyl-2(3H)-furanone (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

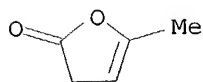
CMF C16 H24 O2



CM 2

CRN 591-12-8

CMF C5 H6 O2



RN 470722-54-4 CAPLUS

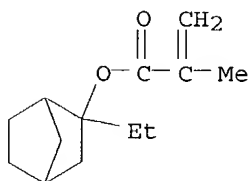
CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 1-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

CM 1

CRN 330595-98-7

CMF C13 H20 O2

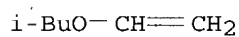




CM 2

CRN 109-53-5

CMF C6 H12 O



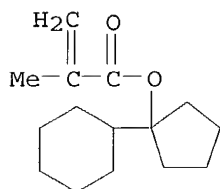
RN 470722-55-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-cyclohexylcyclopentyl ester, polymer with 1-(ethenyloxy)-2-methylpropane (9CI) (CA INDEX NAME)

CM 1

CRN 366808-98-2

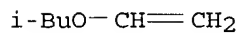
CMF C15 H24 O2



CM 2

CRN 109-53-5

CMF C6 H12 O



RN 470722-56-6 CAPLUS

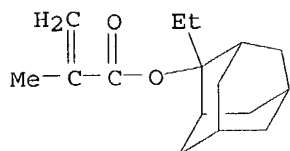
CN 2-Propenoic acid, 2-methyl-, polymer with 1-(ethenyloxy)-2-methylpropane and 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

KOROMA EIC1700

CM 1

CRN 209982-56-9

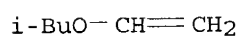
CMF C16 H24 O2



CM 2

CRN 109-53-5

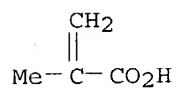
CMF C6 H12 O



CM 3

CRN 79-41-4

CMF C4 H6 O2



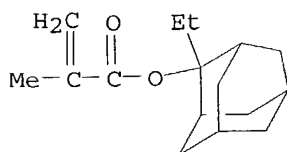
RN 470722-57-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester,  
polymer with 1-(ethenyloxy)-2-methylpropane and tetrahydro-2-oxo-3-furanyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

CMF C16 H24 O2

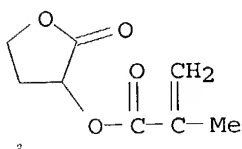


KOROMA EIC1700

CM 2

CRN 195000-66-9

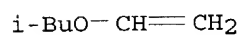
CMF C8 H10 O4



CM 3

CRN 109-53-5

CMF C6 H12 O



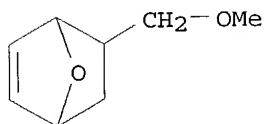
RN 470722-59-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-(methoxymethyl)-7-oxabicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 470722-58-8

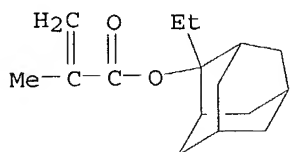
CMF C8 H12 O2



CM 2

CRN 209982-56-9

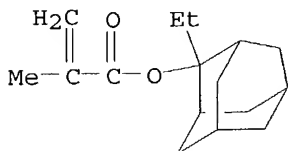
CMF C16 H24 O2



RN 470722-60-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
 polymer with 7-oxabicyclo[2.2.1]hept-5-ene-2-methanol (9CI) (CA INDEX  
 NAME)

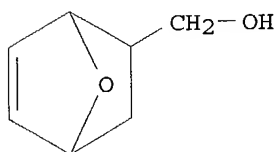
CM 1

CRN 209982-56-9  
 CMF C16 H24 O2



CM 2

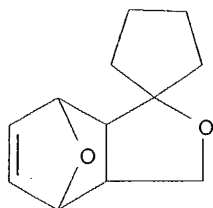
CRN 89898-05-5  
 CMF C7 H10 O2



RN 470722-62-4 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
 polymer with 3'a,4',7',7'a-tetrahydrospiro[cyclopentane-1,1' (3'H) -  
 [4,7]epoxyisobenzofuran] (9CI) (CA INDEX NAME)

CM 1

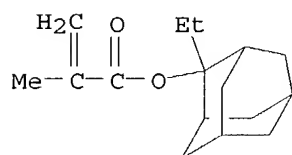
CRN 470722-61-3  
 CMF C12 H16 O2



CM 2

CRN 209982-56-9

CMF C16 H24 O2



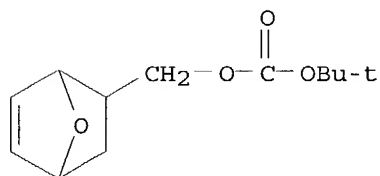
RN 470722-64-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester,  
polymer with 1,1-dimethylethyl 7-oxabicyclo[2.2.1]hept-5-en-2-ylmethyl  
carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 470722-63-5

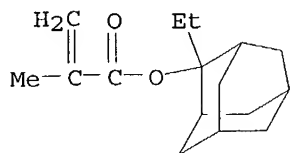
CMF C12 H18 O4



CM 2

CRN 209982-56-9

CMF C16 H24 O2



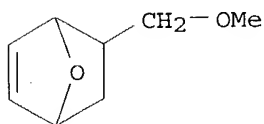
RN 470722-65-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 5-(methoxymethyl)-7-oxabicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 470722-58-8

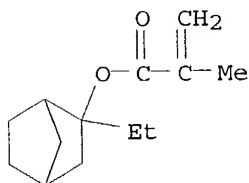
CMF C8 H12 O2



CM 2

CRN 330595-98-7

CMF C13 H20 O2



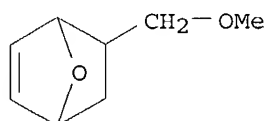
RN 470722-66-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-cyclohexylcyclopentyl ester, polymer with 5-(methoxymethyl)-7-oxabicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 470722-58-8

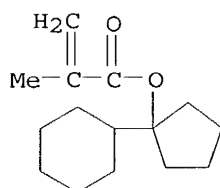
CMF C8 H12 O2



CM 2

CRN 366808-98-2

CMF C15 H24 O2



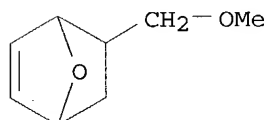
RN 470722-67-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate and 5-(methoxymethyl)-7-oxabicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 470722-58-8

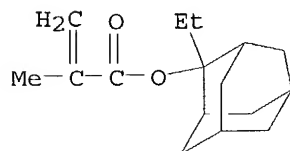
CMF C8 H12 O2



CM 2

CRN 209982-56-9

CMF C16 H24 O2

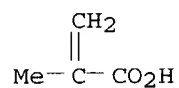


KOROMA EIC1700

CM 3

CRN 79-41-4

CMF C4 H6 O2



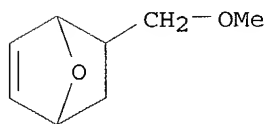
RN 470722-68-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-(methoxymethyl)-7-oxabicyclo[2.2.1]hept-2-ene and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 470722-58-8

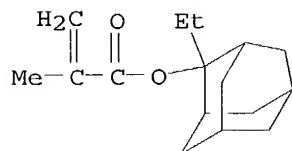
CMF C8 H12 O2



CM 2

CRN 209982-56-9

CMF C16 H24 O2

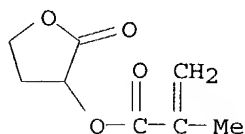


CM 3

CRN 195000-66-9

CMF C8 H10 O4





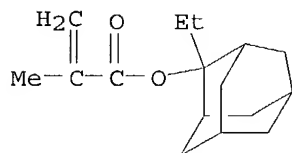
RN 470722-69-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 3,3-diethoxy-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

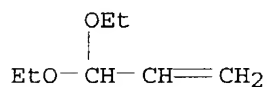
CMF C16 H24 O2



CM 2

CRN 3054-95-3

CMF C7 H14 O2



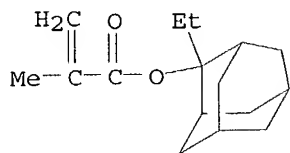
RN 470722-70-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-ethenyl-1,3-dioxolane (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

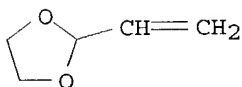
CMF C16 H24 O2



CM 2

CRN 3984-22-3

CMF C5 H8 O2



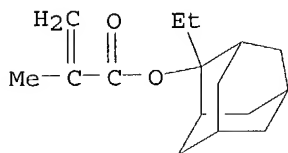
RN 470722-71-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-propenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

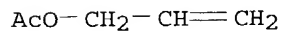
CMF C16 H24 O2



CM 2

CRN 591-87-7

CMF C5 H8 O2



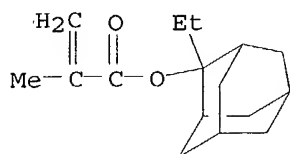
RN 470722-72-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2,5-dihydrofuran (9CI) (CA INDEX NAME)

CM 1

KOROMA EIC1700

CRN 209982-56-9  
CMF C16 H24 O2



CM 2

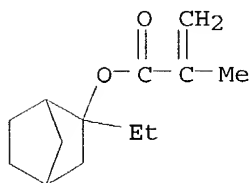
CRN 1708-29-8  
CMF C4 H6 O



RN 470722-73-7 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer  
with 2-ethenyl-1,3-dioxolane (9CI) (CA INDEX NAME)

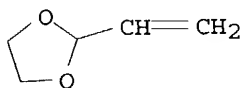
CM 1

CRN 330595-98-7  
CMF C13 H20 O2



CM 2

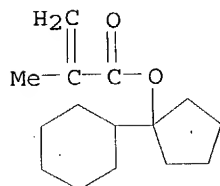
CRN 3984-22-3  
CMF C5 H8 O2



RN 470722-74-8 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-cyclohexylcyclopentyl ester, polymer with  
 2-ethenyl-1,3-dioxolane (9CI) (CA INDEX NAME)

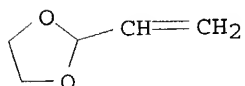
CM 1

CRN 366808-98-2  
 CMF C15 H24 O2



CM 2

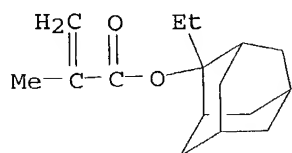
CRN 3984-22-3  
 CMF C5 H8 O2



RN 470722-75-9 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethenyl-1,3-dioxolane and  
 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX  
 NAME)

CM 1

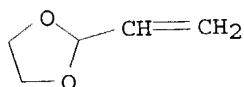
CRN 209982-56-9  
 CMF C16 H24 O2



CM 2

CRN 3984-22-3

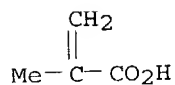
CMF C5 H8 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



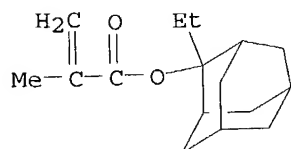
RN 470722-76-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-ethenyl-1,3-dioxolane and tetrahydro-2-oxo-3-furanyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

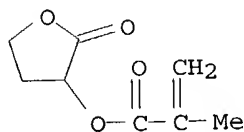
CMF C16 H24 O2



CM 2

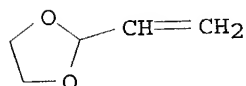
KOROMA EIC1700

CRN 195000-66-9  
CMF C8 H10 O4



CM 3

CRN 3984-22-3  
CMF C5 H8 O2



IC ICM G03F007-038  
ICS G03F007-20; G03F007-38; G03F007-40; G03F007-30  
NCL 430270100  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 38  
ST photoresist polymer compn photolithog  
IT Photoresists  
(polymer for photoresist compn. and **patterning  
process**)  
IT Photolithography  
(vacuum UV; polymer for photoresist compn. and **patterning  
process**)  
IT 470722-46-4P 470722-47-5P 470722-48-6P  
470722-49-7P 470722-50-0P 470722-51-1P  
470722-52-2P 470722-53-3P 470722-54-4P  
470722-55-5P 470722-56-6P 470722-57-7P  
470722-59-9P 470722-60-2P 470722-62-4P  
470722-64-6P 470722-65-7P 470722-66-8P  
470722-67-9P 470722-68-0P 470722-69-1P  
470722-70-4P 470722-71-5P 470722-72-6P  
470722-73-7P 470722-74-8P 470722-75-9P  
470722-76-0P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polymer for **photoresist compn. and  
patterning process**)

KOROMA EIC1700

L30 ANSWER 14 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:671932 CAPLUS

DOCUMENT NUMBER: 137:202031

TITLE: Preparation and **patterning process**  
of silicon-containing chemical amplification positive  
resist compositionsINVENTOR(S): Takeda, Takanobu; Hatakeyama, Jun; Ishihara,  
Toshinobu; Kubota, Tohru; Kubota, Yasufumi

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1236745	A2	20020904	EP 2002-251419	20020228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002348332	A2	20021204	JP 2002-47351	20020225
US 2002168581	A1	20021114	US 2002-85935	20020801
PRIORITY APPLN. INFO.:			JP 2001-56543	A 20010301

AB Novel silicon-contg. polymers, which are obtained by copolymg. vinylsilane with a compd. having a low electron d. unsatd. bond such as maleic anhydride, maleimide derivs. or tetrafluoroethylene, are suitable as the base resin in chem. amplified pos. resist compns. used for micropatterning in a process for the fabrication of semiconductor devices. The resist compns., which are sensitive to high-energy radiation, such as deep-UV light, laser beams, electron beams or X-rays, can form high aspect ratio patterns with high sensitivity and resolu. as well as improved resistance to oxygen or halogen gas plasma etching. Thus, maleic anhydride and trimethylvinylsilane were polymd. in THF using radical polymn. technique; the silicone polymer, photoacid generator, dissoln. inhibitor were thoroughly dissolved in propylene glycol monomethyl ether acetate; the resist soln. was spin coated onto cured DUV-30/novolac resist substrate and then baked at 100.degree. for 90 s to form a resist film of 0.2 .mu.m, followed by exposing to laser beam, baking at 100.degree. for 90 s, and developing in TMAH to obtain a pos. pattern; the resist pattern was then evaluated in sensitivity, resolu., and etc.

IT 452912-33-3P, Maleic anhydride-vinylheptamethylcyclotetrasiloxane-1-ethylcyclopentyl methacrylate copolymer 452912-34-4P, Maleic anhydride-bis(trimethylsilylmethyl)vinylmethylsilane-1-ethylcyclopentyl methacrylate copolymer 452912-35-5P, Maleic anhydride-vinylheptamethylcyclotetrasiloxane-2-ethyl-2-adamantyl methacrylate copolymer 452912-65-1P, Maleic anhydride-trimethylvinylsilane-1-ethylcyclopentyl methacrylate copolymer

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)

(cured and uncured; silicon-contg. chem. amplification pos.  
**resist compns. and patterning**

process thereof)

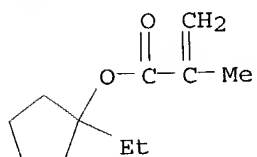
RN 452912-33-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI) (CA INDEX  
NAME)

CM 1

CRN 266308-58-1

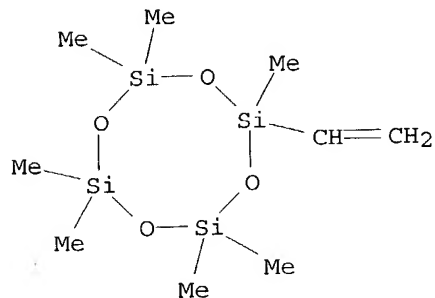
CMF C11 H18 O2



CM 2

CRN 3763-39-1

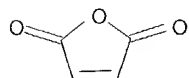
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 452912-34-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with

KOROMA EIC1700

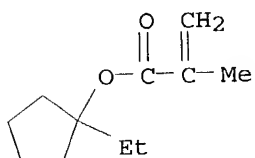


ethenylmethylbis[(trimethylsilyl)methyl]silane and 2,5-furandione (9CI)  
(CA INDEX NAME)

CM 1

CRN 266308-58-1

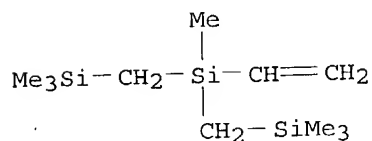
CMF C11 H18 O2



CM 2

CRN 16709-90-3

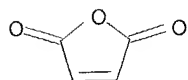
CMF C11 H28 Si3



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 452912-35-5 CAPLUS

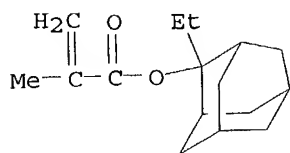
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester,  
polymer with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI)  
(CA INDEX NAME)

CM 1

CRN 209982-56-9

CMF C16 H24 O2

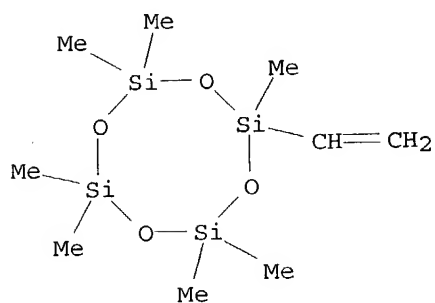
KOROMA EIC1700



CM 2

CRN 3763-39-1

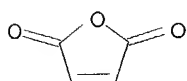
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 452912-65-1 CAPLUS

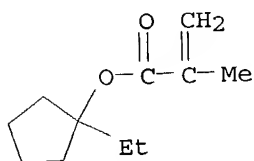
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenyltrimethylsilane and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

CMF C11 H18 O2

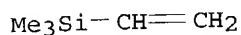
KOROMA EIC1700



CM 2

CRN 754-05-2

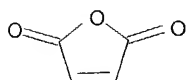
CMF C5 H12 Si



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM C08F030-08

ICS G03F007-075; C08G077-00

CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38, 76

ST silicon contg chem amplification pos resist compn **patterning process**; maleimide vinyl polymer semiconductor device radiation sensitive resist; maleic anhydride trimethylvinylsilane copolymer resist device

IT Positive photoresists  
(UV; silicon-contg. chem. amplification pos. resist compns. and **patterning process** thereof)

IT Phenolic resins, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(novolak, substrate layer; silicon-contg. chem. amplification pos. resist compns. and **patterning process** thereof)

IT Resists  
(pos.-working radiation-sensitive; silicon-contg. chem. amplification pos. resist compns. and **patterning process** thereof)

IT Electron beam resists  
(pos.-working; silicon-contg. chem. amplification pos. resist compns. and **patterning process** thereof)

IT Etching

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Semiconductor device fabrication  
(silicon-contg. chem. amplification pos. resist compns. and  
**patterning process** thereof)

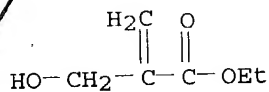
- IT Polymers, preparation  
RL: CPS (Chemical process); IMF (Industrial manufacture); PEP (Physical,  
engineering or chemical process); POF (Polymer in formulation); PRP  
(Properties); PREP (Preparation); PROC (Process); USES (Uses)  
(silicon-contg.; silicon-contg. chem. amplification pos. resist compns.  
and **patterning process** thereof)
- IT 26702-38-5P, Maleic anhydride-trimethylvinylsilane copolymer  
452912-28-6P, N-Methylmaleimide-trimethylvinylsilane copolymer  
452912-29-7P 452912-30-0P, Trimethylvinylsilane-tetrafluoroethylene  
copolymer 452912-31-1P, Maleic anhydride-vinylheptamethylcyclotetrasilox  
ane copolymer 452912-32-2P, Maleic anhydride-  
bis(trimethylsilylmethyl)vinylmethylsilane) copolymer **452912-33-3P**  
, Maleic anhydride-vinylheptamethylcyclotetrasiloxane-1-ethylcyclopentyl  
methacrylate copolymer **452912-34-4P**, Maleic anhydride-  
bis(trimethylsilylmethyl)vinylmethylsilane-1-ethylcyclopentyl methacrylate  
copolymer **452912-35-5P**, Maleic anhydride-  
vinylheptamethylcyclotetrasiloxane-2-ethyl-2-adamantyl methacrylate  
copolymer **452912-65-1P**, Maleic anhydride-trimethylvinylsilane-1-  
ethylcyclopentyl methacrylate copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer  
in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
(cured and uncured; silicon-contg. chem. amplification pos.  
**resist compns. and patterning**  
**process** thereof)
- IT 409321-21-7 409321-23-9  
RL: DEV (Device component use); MOA (Modifier or additive use); PRP  
(Properties); USES (Uses)  
(dissoln. inhibitor; silicon-contg. chem. amplification pos. resist  
compns. and **patterning process** thereof)
- IT 66003-76-7 66003-78-9  
RL: DEV (Device component use); MOA (Modifier or additive use); PRP  
(Properties); USES (Uses)  
(photoacid generator; silicon-contg. chem. amplification pos. resist  
compns. and **patterning process** thereof)
- IT 84540-57-8, Propyleneglycol monomethyl ether acetate  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; silicon-contg. chem. amplification pos. resist compns. and  
**patterning process** thereof)
- IT 59269-51-1, Polyhydroxystyrene  
RL: NUU (Other use, unclassified); USES (Uses)  
(substrate layer; silicon-contg. chem. amplification pos. resist  
compns. and **patterning process** thereof)
- IT 81458-41-5, OFPR-800  
RL: NUU (Other use, unclassified); USES (Uses)  
(substrate; silicon-contg. chem. amplification pos. resist compns. and  
**patterning process** thereof)

L30 ANSWER 15 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2002:656149 CAPLUS

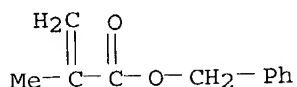
DOCUMENT NUMBER: 137:208365  
 TITLE: Colored photoresist composition for manufacturing color filter for imaging device  
 INVENTOR(S): Takebe, Kazuo  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002244292	A2	20020830	JP 2001-44753	20010221
			JP 2001-44753	20010221

PRIORITY APPLN. INFO.:  
 AB The title colored photoresist compn. comprises (1) colorants, (2) copolymers, (3) photopolymerizable compds., and (4) photopolymn. initiators, wherein the copolymers include 0.5-96 % of .alpha.-hydroxymethyl repeating unit CH<sub>2</sub>:C(CH<sub>2</sub>OH)CO<sub>2</sub>R [R = H, alkyl, cycloalkyl, aralkyl, aryl, glycidyl, norbornyl, etc.]. The colored photoresist compn. is patterned to manuf. color filters suitable for imaging devices. The colored photoresist compn. produces reduced amt. of photoresist residues during the **patterning processes**.  
 IT 452308-81-5, Benzyl methacrylate-ethyl .alpha.-hydroxymethylacrylate-methacrylic acid copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (in colored photoresist compn. for manufg. color filter for imaging device)  
 RN 452308-81-5 CAPLUS  
 CN 2-Propenoic acid, 2-(hydroxymethyl)-, ethyl ester, polymer with 2-methyl-2-propenoic acid and phenylmethyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)  
 CM 1  
 CRN 10029-04-6  
 CMF C6 H10 O3



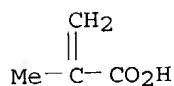
CM 2  
 CRN 2495-37-6  
 CMF C11 H12 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



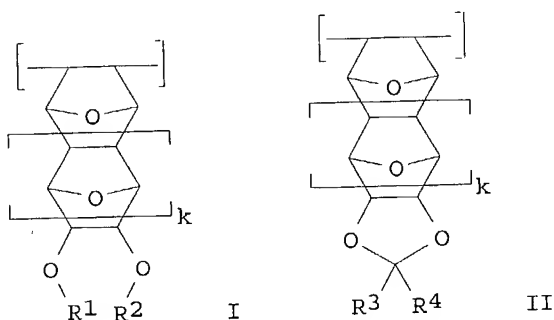
- IC ICM G03F007-033  
ICS C08F002-44; C08F002-50; C08F265-06; G02B005-20; G02F001-1335;  
G03F007-004; G03F007-028
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 73, 76
- ST colored photoresist compn color filter manuf imaging device
- IT Electrooptical imaging devices  
Optical filters  
Optical imaging devices  
Photoresists  
(colored photoresist compn. for manufg. color filter for imaging  
device)
- IT 452308-81-5, Benzyl methacrylate-ethyl .alpha.-  
hydroxymethylacrylate-methacrylic acid copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(in colored photoresist compn. for manufg. color  
filter for imaging device)
- IT 29570-58-9, Dipentaerythritol hexaacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photopolymerizable compd. in colored photoresist compn. for manufg.  
color filter for imaging device)
- IT 71868-10-5, Irgacure 907 190260-57-2, Triazine PP  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photopolymn. initiator in colored photoresist compn. for manufg. color  
filter for imaging device)
- IT 14302-13-7, C.I.Pigment Green 36 25157-64-6, C.I.Pigment Yellow 150  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pigment in colored photoresist compn. for manufg. color filter for  
imaging device)

L30 ANSWER 16 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2002:638326 CAPLUS  
DOCUMENT NUMBER: 137:192764  
TITLE: Polymer, resist composition and patterning

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**process**  
 INVENTOR(S): Nishi, Tsunehiro; Kinsho, Takeshi  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: U.S. Pat. Appl. Publ., 34 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002115821	A1	20020822	US 2001-3117	20011206
JP 2002234915	A2	20020823	JP 2001-369711	20011204
PRIORITY APPLN. INFO.: GI			JP 2000-372406	A 20001207



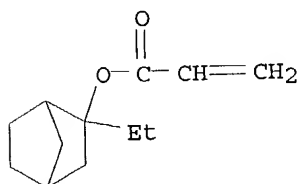
AB The present invention relates to a polymer comprising recurring units of I and/or II ( $R_{1,2}$  = H, C1-15 alkyl, acyl, alkylsulfonyl, C2-15 alkoxy, alkoxyalkyl which may have halogen substituents;  $R_{3,4}$  = H, C1-15 alkyl, alkoxy, C2-15, alkoxyalkyl which may have halogen substituents, and  $R_{3,4}$  may together bond with the carbon atom to form an aliph. ring, or  $R_{3,4}$  taken together, may be an oxygen atom;  $k=0$  or 1), and having a Mw of 1,000-500,000. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity, resolu., etching resistance, and minimized swell and lends itself to micropatterning with electron beams or deep-UV.

IT 449173-04-0P 449173-05-1P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymer, resist compn. for micropatterning process)

RN 449173-04-0 CAPLUS  
 CN 2-Propenoic acid, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and 3a,4,7,7a-tetrahydro-2,2-dimethyl-4,7-epoxy-1,3-benzodioxole (9CI) (CA INDEX NAME)

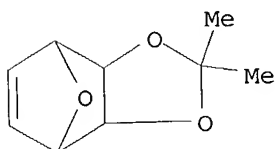
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CRN 449173-03-9  
CMF C12 H18 O2



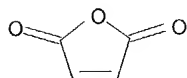
CM 2

CRN 449172-91-2  
CMF C9 H12 O3



CM 3

CRN 108-31-6  
CMF C4 H2 O3

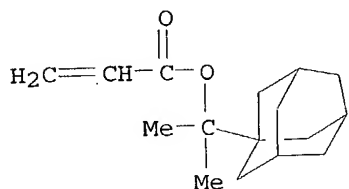


RN 449173-05-1 CAPLUS  
CN 2-Propenoic acid, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester,  
polymer with 3a,4,7,7a-tetrahydro-4,7-epoxy-1,3-benzodioxol-2-one (9CI)  
(CA INDEX NAME)

CM 1

CRN 300833-10-7  
CMF C16 H24 O2

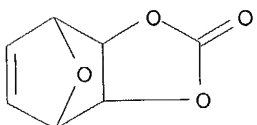




CM 2

CRN 50269-96-0

CMF C7 H6 O4



IC ICM C08G055-34

NCL 528425000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST photoresist photolithog resin

IT Photolithography

(UV; polymer, resist compn. for micropatterning process)

IT Photoresists

(polymer, resist compn. for micropatterning process)

IT 449172-89-8P 449172-90-1P 449172-92-3P 449172-94-5P 449172-95-6P  
449172-96-7P 449172-98-9P 449172-99-0P 449173-01-7P 449173-02-8P  
449173-04-0P 449173-05-1P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymer, resist compn. for micropatterning process)

L30 ANSWER 17 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:638323 CAPLUS

DOCUMENT NUMBER: 137:192763

TITLE: Polymer, resist composition and **patterning process**

INVENTOR(S): Nishi, Tsunehiro; Nakashima, Mutsuo; Kobayashi, Tomohiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 35 pp.

CODEN: USXXCO

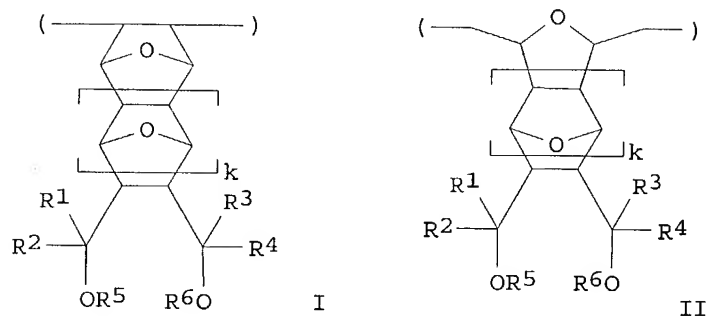
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002115807	A1	20020822	US 2001-998200	<u>20011203</u>
US 6512067	B2	20030128		
JP 2002234914	A2	20020823	JP 2001-363804	20011129
US 2003120009	A1	20030626	US 2002-307996	<u>20021203</u>
US 6605678	B2	20030812		
PRIORITY APPLN. INFO.:			JP 2000-368628	A 20001204
			US 2001-998200	A3 20011203

GI



AB The present invention relates to a polymer comprising recurring units of formula I or II (R1-4 = H, C1-15 alkyl, R1,2, and R3,4, taken together, may form a ring; R5,6 = H, C1-15 alkyl, acyl, alkylsulfonyl groups, C2-15 alkoxy carbonyl or alkoxyalkyl groups which may have halogen substituents; and k=0 or 1); and having a Mw of 1,000-500,000. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity, resoln., etching resistance, and minimized swell and lends itself to micropatterning with electron beams or deep-UV.

IT 449165-78-0P 449165-82-6P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymer, resist compn. for micropatterning process)

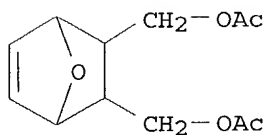
RN 449165-78-0 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .beta.-(acetyloxy)-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and 7-oxabicyclo[2.2.1]hept-5-ene-2,3-diylbis(methylene) diacetate (9CI) (CA INDEX NAME)

CM 1

CRN 449165-64-4

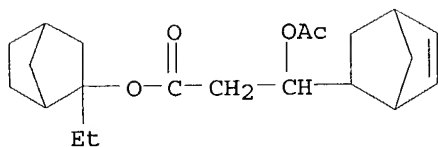
CMF C12 H16 O5



CM 2

CRN 371148-04-8

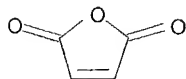
CMF C21 H30 O4



CM 3

CRN 108-31-6

CMF C4 H2 O3



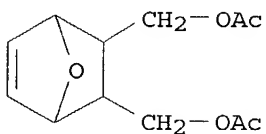
RN 449165-82-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and 7-oxabicyclo[2.2.1]hept-5-ene-2,3-diylbis(methylene) diacetate (9CI) (CA INDEX NAME)

CM 1

CRN 449165-64-4

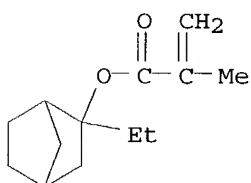
CMF C12 H16 O5



CM 2

CRN 330595-98-7

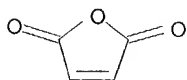
CMF C13 H20 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM C08F124-00

NCL 526266000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST photoresist photolithog electron beam UV

IT Photolithography

(UV; polymer, resist compn. for micropatterning process)

IT Photoresists

(polymer, resist compn. for micropatterning process)

IT 449165-65-5P 449165-69-9P 449165-73-5P 449165-76-8P

**449165-78-0P** 449165-80-4P **449165-82-6P** 449165-84-8P

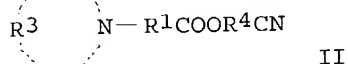
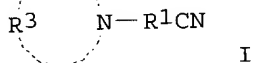
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymer, **resist compn.** for micropatterning process)

KOROMA EIC1700

L30 ANSWER 18 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2002:638186 CAPLUS  
 DOCUMENT NUMBER: 137:192762  
 TITLE: Amine compounds, resist compositions and  
**patterning process**  
 INVENTOR(S): Hatakeyama, Jun; Kobayashi, Tomohiro; Watanabe, Takeru  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: U.S. Pat. Appl. Publ., 40 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002115018	A1	20020822	US 2001-3288	20011206
JP 2002249478	A2	<del>20020906</del>	JP 2001-369719	20011204
PRIORITY APPLN. INFO.:			JP 2000-373316 A	20001207
OTHER SOURCE(S):	MARPAT 137:192762			
GI				



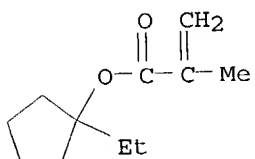
AB Amine compds. having a cyano group are useful in resist compns. for preventing a resist film from thinning and also for enhancing the resolu. and focus margin of resist. The invention amine compds. have general formulas: (R<sub>2</sub>)b-N-(R<sub>1</sub>-CN)a; I; (R<sub>2</sub>)b-N-(R<sub>1</sub>C(=O)OR<sub>4</sub>-CN)a; II (R<sub>1,4</sub> = C<sub>1</sub>-4 alkylene; R<sub>2</sub> = C<sub>1</sub>-20 cycloc alkyl which may contain a hydroxy group, ether, carbonyl, ester, lactone ring, carbonate, cyano group; R<sub>3</sub> = C<sub>2</sub>-20 alkylene which may contain hydroxy, ether, thioether, carbonyl, ester, thioester group, carbonate; a = 1-3; a+b = 3).

IT 326925-68-2 443796-30-3 449165-94-0  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (resin; amine compds. and photoresist compns. for  
**patterning process**)

RN 326925-68-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
 4-ethenylphenol (9CI) (CA INDEX NAME)

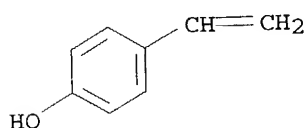
CM 1

CRN 266308-58-1  
CMF C11 H18 O2



CM 2

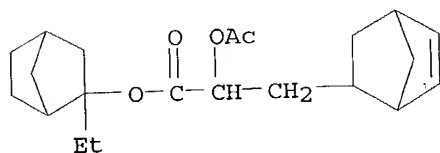
CRN 2628-17-3  
CMF C8 H8 O



RN 443796-30-3 CAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .alpha.-(acetyloxy)-,  
2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and  
2-(2-methoxyethoxy)ethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA  
INDEX NAME)

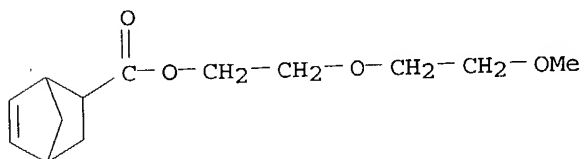
CM 1

CRN 443796-29-0  
CMF C21 H30 O4



CM 2

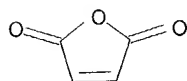
CRN 295328-74-4  
CMF C13 H20 O4



CM 3

CRN 108-31-6

CMF C4 H2 O3

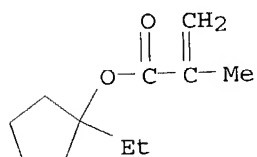


RN 449165-94-0 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
 hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

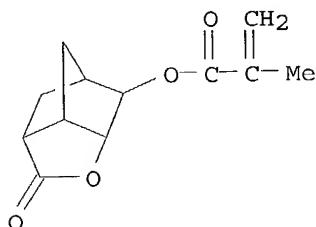
CMF C11 H18 O2



CM 2

CRN 254900-07-7

CMF C12 H14 O4



IC ICM G03F007-038  
ICS G03F007-039; G03F007-38

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

ST photoresist amine cyano compd

IT Photoresists  
(amine compds. and photoresist compns. for **patterning process**)

IT 3010-02-4P 3088-41-3P, 1-Piperidinepropanenitrile 4542-47-6P, 4-Morpholinepropanenitrile 5807-02-3P, 4-Morpholineacetonitrile 5807-11-4P, 4-Morpholinebutanenitrile 86071-97-8P 449165-34-8P 449165-36-0P 449165-43-9P 449165-45-1P 449165-48-4P 449165-74-6P 449165-79-1P 449165-90-6P 449165-92-8P 449165-93-9P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(amine compds. and photoresist compns. for **patterning process**)

IT 6305-56-2P 17209-72-2P 34449-93-9P 34449-97-3P 55110-98-0P 86241-19-2P 449165-40-6P 449165-53-1P 449165-61-1P 449165-71-3P 449165-91-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(amine compds. and photoresist compns. for **patterning process**)

IT 1555-57-3P 3010-03-5P, 1-Piperidineacetonitrile 5351-04-2P 7327-60-8P 7528-78-1P 26165-45-7P, 1-Pyrrolidinepropanenitrile 29134-29-0P, 1-Pyrrolidineacetonitrile 336608-77-6P 449165-35-9P 449165-38-2P 449165-39-3P 449165-41-7P 449165-42-8P 449165-44-0P 449165-46-2P 449165-47-3P 449165-49-5P 449165-50-8P 449165-51-9P 449165-52-0P 449165-54-2P 449165-55-3P 449165-56-4P 449165-57-5P 449165-58-6P 449165-59-7P 449165-60-0P 449165-62-2P 449165-63-3P 449165-66-6P 449165-67-7P 449165-70-2P 449165-77-9P 449165-81-5P 449165-83-7P 449165-85-9P 449165-86-0P 449165-87-1P 449165-88-2P 449165-89-3P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(amine compds. and photoresist compns. for **patterning process**)

IT 3089-11-0



RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(crosslinker; amine compds. and photoresist compns. for patterning process)

IT 117458-06-7 138529-81-4 144317-44-2 266308-64-9

RL: TEM (Technical or engineered material use); USES (Uses)

(photoacid generator; amine compds. and photoresist compns. for patterning process)

IT 64-18-6, Formic acid, reactions 75-04-7, Ethylamine, reactions  
96-33-3, Methyl acrylate 106-71-8 107-13-1, Acrylonitrile, reactions  
109-85-3, 2-Methoxyethylamine 109-89-7, Diethylamine, reactions  
110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions  
111-42-2, Diethanolamine, reactions 111-95-5 121-44-8, Triethylamine, reactions  
123-75-1, Pyrrolidine, reactions 141-43-5, 2-Aminoethanol, reactions  
156-87-6, 3-Hydroxy-1-propylamine 590-17-0, Bromoacetonitrile  
929-06-6 4795-29-3, Tetrahydrofurfurylamine 5332-06-9,  
4-Bromobutyronitrile 13818-40-1, Cyanomethyl acrylate 22483-09-6,  
2,2-Dimethoxyethylamine 74264-63-4 449165-37-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of amine compds. and photoresist compns. for patterning process)

IT 24979-74-6 129674-22-2 158593-28-3 221900-55-6 279243-86-6  
326925-68-2 336620-26-9 443796-30-3  
449165-94-0 449165-96-2

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(resin; amine compds. and photoresist compns. for patterning process)

L30 ANSWER 19 OF 67 CAPLUS COPYRIGHT/2003 ACS on STN

ACCESSION NUMBER: 2002:616396 CAPLUS

DOCUMENT NUMBER: 137:177110

TITLE: Preparation of polymer, and resist composition using the polymer

INVENTOR(S): Takeda, Takanobu; Watanabe, Osamu

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 16 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002111459	A1	20020815	US 2001-3121	20011206
JP 2002234910	A2	20020823	JP 2001-369729	20011204
			JP 2000-372408 A	20001207

PRIORITY APPLN. INFO.:  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The present invention relates to the prepn. of polymer comprising recurring units of I (R1,4 = H, methyl; R2,3 = C1-10 alkyl; R2 and R3 may form a ring; R5 = H, hydroxyl, alkyl, alkoxy, halogen; R6,7 = H, Me,alkoxycarbonyl, cyano, halogen; R8 = C4-20 tertiary alkyl; n = 0-4; p = pos. number; q, r = pos. no., 0; exclusive of q=r=0; p1 = pos. no.; p2 = 0, pos. no., and p1+p2=p) by effecting deblocking reaction on a polymer comprising recurring units of II in the presence of an acid catalyst. The polymer thus produced has a narrower mol. wt. distribution than polymers produced by the prior art methods. A resist compn. comprising the polymer as a base resin has advantages including a dissoln. contrast of resist film, high resoln., exposure latitude, **process** flexibility, good **pattern** profile after exposure, and minimized line edge roughness.

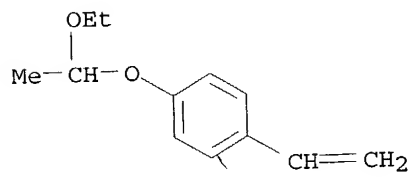
IT 157057-23-3DP, hydrolyzed or partially hydrolyzed  
 446845-72-3DP, hydrolyzed 446845-75-6DP, hydrolyzed  
 446845-77-8DP, hydrolyzed  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of polymer and **photoresist compn.** contg.)

RN 157057-23-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

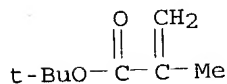
CM 1

CRN 157057-20-0  
 CMF C12 H16 O2



CM 2

CRN 585-07-9  
 CMF C8 H14 O2



RN 446845-72-3 CAPLUS

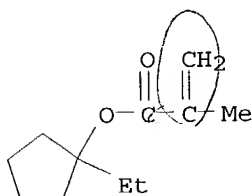
KOROMA EIC1700

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

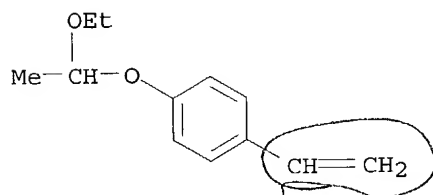
CMF C11 H18 O2



CM 2

CRN 157057-20-0

CMF C12 H16 O2



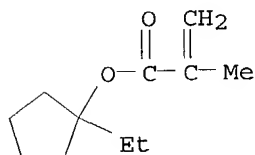
RN 446845-75-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
ethenylbenzene and 1-ethenyl-4-(1-ethoxyethoxy)benzene (9CI) (CA INDEX  
NAME)

CM 1

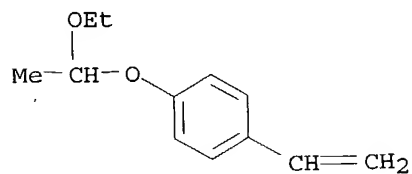
CRN 266308-58-1

CMF C11 H18 O2



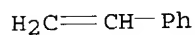
CM 2

CRN 157057-20-0  
CMF C12 H16 O2



CM 3

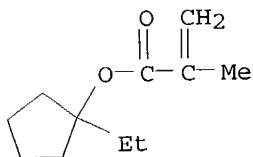
CRN 100-42-5  
CMF C8 H8



RN 446845-77-8 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-ethenyl-4-(1-  
ethoxyethoxy)benzene (9CI) (CA INDEX NAME)

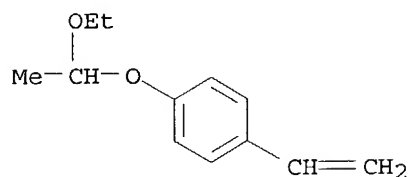
CM 1

CRN 266308-58-1  
CMF C11 H18 O2



CM 2

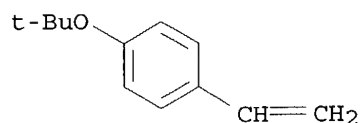
CRN 157057-20-0  
CMF C12 H16 O2



CM 3

CRN 95418-58-9

CMF C12 H16 O



IC ICM G03F007-038

ICS C08F006-06

NCL 528486000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST photoresist polymer photolithog UV

IT Photolithography

(UV; prepn. of polymer and resist compn. for)

IT Positive photoresists

(prepn. of polymer and resist compn. for)

IT 157057-23-3DP, hydrolyzed or partially hydrolyzed

446845-72-3DP, hydrolyzed 446845-75-6DP, hydrolyzed

446845-77-8DP, hydrolyzed 446845-79-0DP, hydrolyzed

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. of polymer and photoresist compn. contg.)

L30 ANSWER 20 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:575607 CAPLUS

DOCUMENT NUMBER: 137:132115

TITLE: Polymer, resist composition and **patterning process**

INVENTOR(S): Nishi, Tsunehiro; Nakashima, Mutsuo; Kobayashi, Tomohiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 35 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

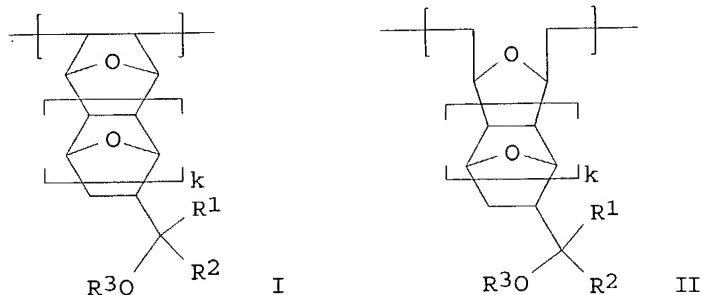
LANGUAGE: English

KOROMA EIC1700

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002102493	A1	20020801	US 2001-221	20011204
JP 2002234913	A2	20020823	JP 2001-363803	20011129
PRIORITY APPLN. INFO.:			JP 2000-368672	A 20001204

GI



AB The present invention relates to a polymer comprising recurring units of I, II ( $R_{1,2} = H$ , C1-15 alkyl,  $R_{1,2}$  taken together, may form a ring;  $R_3 = H$ , C1-15 alkyl, acyl or alkylsulfonyl or C2-15 alkoxy carbonyl or alkoxyalkyl which may have halogen substituents; not all  $R_{1-3}$  are hydrogen;  $k = 0$  or 1) and having a Mw of 1,000-500,000.. The present invention relates to a photoresist compn. comprising the polymer as a base resin which is sensitive to high-energy radiation, has excellent sensitivity, resoln., etching resistance, and minimized swell and lends itself to micropatterning with electron beams or deep-UV.

IT 444105-79-7P 444105-83-3P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymer photoresist compn. for patterning process)

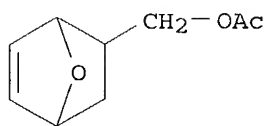
RN 444105-79-7 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .beta.-(acetyloxy)-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and 7-oxabicyclo[2.2.1]hept-5-ene-2-methyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 444105-76-4

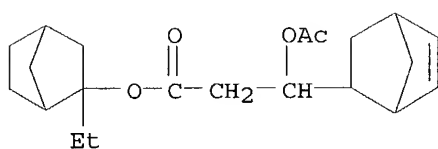
CMF C9 H12 O3



CM 2

CRN 371148-04-8

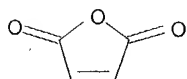
CMF C21 H30 O4



CM 3

CRN 108-31-6

CMF C4 H2 O3



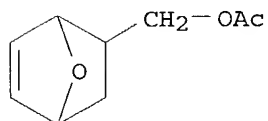
RN 444105-83-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and 7-oxabicyclo[2.2.1]hept-5-ene-2-methyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 444105-76-4

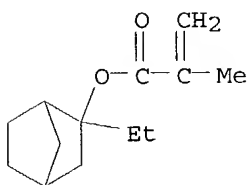
CMF C9 H12 O3



CM 2

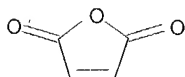
KOROMA EIC1700

CRN 330595-98-7  
CMF C13 H20 O2



CM 3

CRN 108-31-6  
CMF C4 H2 O3



IC ICM G03F007-038  
ICS G03F007-38; G03F007-40; G03F007-30  
NCL 430270100  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 38  
ST photoresists resin photolithog  
IT Photolithography  
(UV; polymer photoresist compn. for **patterning  
process**)  
IT Photoresists  
(polymer photoresist compn. for **patterning process**)  
IT 444045-74-3P 444045-76-5P 444045-78-7P 444105-77-5P  
444105-79-7P 444105-81-1P 444105-83-3P 444105-85-5P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polymer photoresist compn. for **patterning  
process**)

L30 ANSWER 21 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2002:556011 CAPLUS  
DOCUMENT NUMBER: 137:116959  
TITLE: Amine compounds for resist compositions and  
**patterning process**  
INVENTOR(S): Hatakeyama, Jun; Kobayashi, Tomohiro; Watanabe,  
Takeru; Nagata, Takeshi  
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

KOROMA EIC1700



SOURCE: U.S. Pat. Appl. Publ., 32 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002098443	A1	20020725	US 2001-994808	20011128
JP 2002226470	A2	20020814	JP 2001-359331	20011126
PRIORITY APPLN. INFO.:			JP 2000-362800	A 20001129

OTHER SOURCE(S): MARPAT 137:116959

AB Disclosed are novel amine compds. having a nitrogen-contg. cyclic structure and a hydrating group such as a hydroxy, ether, ester, carbonyl, carbonate group or lactone ring which are useful as basic compds. for use in resist compns. for preventing a resist film from thinning and also for enhancing the resoln. and focus margin of resist. Also disclosed resist compns. comprising the inventive amine derivs. as basic compds.

IT 326925-70-6 443796-28-9 443796-30-3

RL: TEM (Technical or engineered material use); USES (Uses)  
 (amine compds. as basic materials for resist compns  
 .)

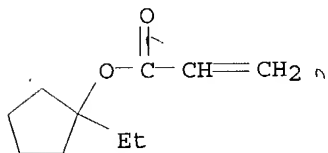
RN 326925-70-6 CAPLUS

CN 2-Propenoic acid, 1-ethylcyclopentyl ester, polymer with 4-ethenylphenol  
 (9CI) (CA INDEX NAME)

CM 1

CRN 326925-69-3

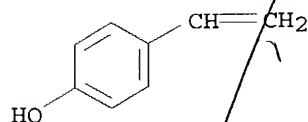
CMF C10 H16 O2



CM 2

CRN 2628-17-3

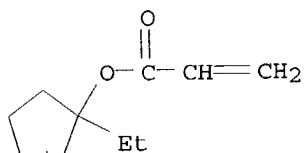
CMF C8 H8 O



RN 443796-28-9 CAPLUS  
 CN 2-Propenoic acid, 1-ethylcyclopentyl ester, polymer with  
 hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-propenoate (9CI)  
 (CA INDEX NAME)

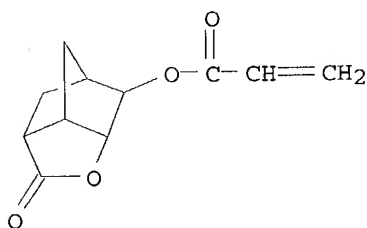
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CRN 326925-69-3  
 CMF C10 H16 O2



CM 2

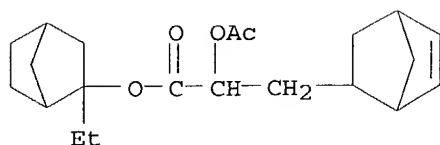
CRN 242129-35-7  
 CMF C11 H12 O4



RN 443796-30-3 CAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .alpha.-(acetyloxy)-,  
 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and  
 2-(2-methoxyethoxy)ethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA  
 INDEX NAME)

CM 1

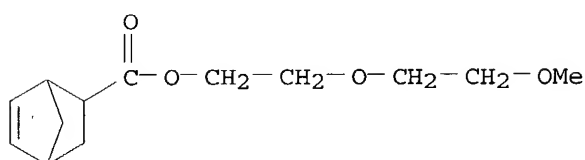
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 CMF C21 H30 O4



CM 2

CRN 295328-74-4

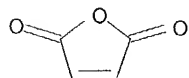
CMF C13 H20 O4



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-038  
 ICS G03F007-38; G03F007-40; G03F007-20; G03F007-30; C07D047-02  
 NCL 430270100  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST amine compd photoresist UV resist compn lithog photolithog; photoresist UV resist electron beam amine compd lithog  
 IT Photoresists  
 (UV; amine compds. as basic materials for resist compns.)  
 IT Electron beam resists  
 Photolithography  
 (amine compds. as basic materials for resist compns.)  
 IT 1199-83-3P 4151-03-5P 13276-24-9P 20120-24-5P 20768-93-8P  
 21193-86-2P 22041-18-5P 22041-19-6P 22041-21-0P 23573-93-5P  
 24589-56-8P 33611-43-7P 35855-10-8P 54996-29-1P 55643-40-8P  
 58583-90-7P 60254-45-7P 62005-12-3P 62260-79-1P 63431-38-9P  
 67411-59-0P 88217-57-6P 90727-03-0P 100050-34-8P 167279-38-1P  
 300555-03-7P 443795-94-6P 443795-95-7P 443795-96-8P 443795-97-9P

KOROMA EIC1700

443795-98-0P 443795-99-1P 443796-00-7P 443796-01-8P 443796-02-9P  
 443796-03-0P 443796-04-1P 443796-05-2P 443796-06-3P 443796-07-4P  
 443796-08-5P 443796-09-6P 443796-10-9P 443796-11-0P 443796-12-1P  
 443796-13-2P 443796-14-3P 443796-15-4P 443796-16-5P 443796-17-6P  
 443796-18-7P 443796-19-8P 443796-20-1P 443796-21-2P 443796-22-3P  
 443796-23-4P 443796-24-5P 443796-25-6P 443796-26-7P 443796-27-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (amine compds. as basic materials for resist compns.)  
 IT 24979-74-6 129674-22-2 158593-28-3 218796-79-3 279243-86-6  
 326925-70-6 336620-26-9 443796-28-9  
 443796-30-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (amine compds. as basic materials for resist compns  
 .)  
 IT 117458-06-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (crosslinker; amine compds. as basic materials for resist compns.)  
 IT 79-03-8, Propanoyl chloride 79-22-1, Methyl chloroformate 80-62-6,  
 Methyl methacrylate 96-32-2, Methyl bromoacetate 96-33-3, Methyl  
 acrylate 106-90-1, Glycidyl acrylate 110-89-4, Piperidine, reactions  
 110-91-8, Morpholine, reactions 121-44-8, Triethylamine, reactions  
 123-75-1, Pyrrolidine, reactions 123-90-0, Thiomorpholine 140-88-5,  
 Ethyl acrylate 141-32-2, Butyl acrylate 141-75-3, Butyric chloride  
 142-61-0, Hexanoyl chloride 497-23-4, 2-(5H)-Furanone 547-65-9,  
 .alpha.-Methylene-.gamma.-butyrolactone 622-40-2, 4-(2-  
 Hydroxyethyl)morpholine 628-12-6, 2-Methoxyethyl chloroformate  
 1192-30-9, Tetrahydrofurfuryl bromide 2109-66-2, 4-(2-  
 Hydroxypropyl)morpholine 2399-48-6, Tetrahydrofurfuryl acrylate  
 2955-88-6, 1-(2-Hydroxyethyl)pyrrolidine 3040-44-6, 1-(2-  
 Hydroxyethyl)piperidine 3066-71-5, Cyclohexyl acrylate 3121-61-7,  
 2-Methoxyethyl acrylate 3282-30-2, Pivaloyl chloride 3393-45-1,  
 5,6-Dihydro-2H-pyran-2-one 3970-21-6, 2-Methoxyethoxymethyl chloride  
 6425-32-7, 3-Morpholino-1,2-propane diol 7251-90-3, 2-Butoxyethyl  
 acrylate 7328-18-9, 2-(2-Methoxyethoxy)ethyl acrylate 13831-31-7,  
 Acetoxyacetyl chloride 16024-55-8, 2-Methoxyethoxyacetyl chloride  
 24424-99-5, Di-tert-butyl pyrocarbonate 38870-89-2, Methoxyacetyl  
 chloride 55231-03-3, 2-Acetoxyethyl acrylate 62921-74-8,  
 2-[2-(2-Methoxyethoxy)ethoxy]ethyl p-toluenesulfonate 62921-76-0  
 163750-71-8 328249-37-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in prepn. of amine derivs.)  
 IT 6293-66-9 138529-81-4 144317-44-2 266308-64-9  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoacid generator; amine compds. as basic materials for resist  
 compns.)

L30 ANSWER 22 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2002:522667 CAPLUS  
 DOCUMENT NUMBER: 137:79393  
 TITLE: Polymers of polycyclic compounds, resist composition  
 and patterning process

INVENTOR(S): Tachibana, Seichiro; Nakashima, Mutsuo; Nishi, Tsunehiro; Kinsho, Takeshi; Hasegawa, Koji; Watanabe, Takeru; Hatakeyama, Jun  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: U.S. Pat. Appl. Publ., 38 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002091215	A1	20020711	US 2001-986274	20011108
JP 2002206012	A2	20020726	JP 2001-331910	20011030
PRIORITY APPLN. INFO.:			JP 2000-343324	A 20001110

AB The invention provides a polymer comprising recurring units contg. bridged aliph. rings in the backbone and having a hydroxyl, acyloxy or alkoxycarbonyloxy group as well as a lactone structure bonded through a spacer, the polymer having a wt. av. mol. wt. of 1,000-500,000. A resist compn. comprising the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity, resoln., and etching resistance, and lends itself to micropatterning with electron beams or deep-UV. A polymer was prepd. by polymn. of .alpha.-[hydroxy(5-norbornen-2-yl)methyl]-.gamma.-butyrolactone, 2-ethyl-2-norbornyl 5-norbornene-2-carboxylate, and maleic anhydride using AIBN initiator.

IT 441071-47-2P 441071-51-8P 441071-53-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymers of polycyclic compds., resist compn. and patterning process)

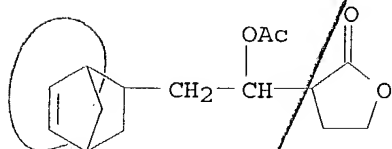
RN 441071-47-2 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .beta.-(acetyloxy)-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 3-[1-(acetyloxy)-2-bicyclo[2.2.1]hept-5-en-2-ylethyl]dihydro-2(3H)-furanone and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

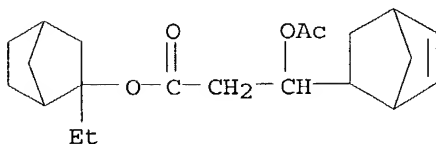
CRN 398488-22-7

CMF C15 H20 O4



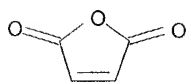
CM 2

CRN 371148-04-8  
CMF C21 H30 O4



CM 3

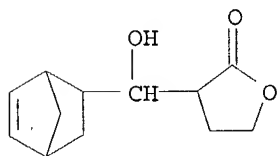
CRN 108-31-6  
CMF C4 H2 O3



RN 441071-51-8 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer  
with 3-(bicyclo[2.2.1]hept-5-en-2-ylhydroxymethyl)dihydro-2(3H)-furanone  
and 2,5-furandione (9CI) (CA INDEX NAME)

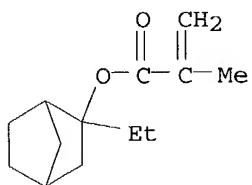
CM 1

CRN 398488-19-2  
CMF C12 H16 O3



CM 2

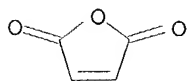
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CMF C13 H20 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



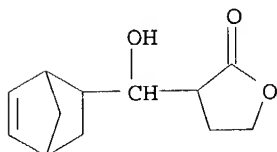
RN 441071-53-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.1.3,7]dec-1-ylethyl ester, polymer with 3-(bicyclo[2.2.1]hept-5-en-2-ylhydroxymethyl)dihydro-2(3H)-furanone and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 398488-19-2

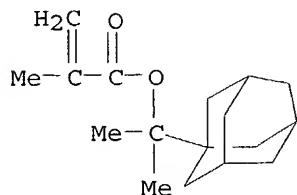
CMF C12 H16 O3



CM 2

CRN 279218-76-7

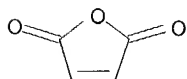
CMF C17 H26 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM C08F024-00

NCL 526266000

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 74

ST polycyclic compd polymer resist

IT Resists

(polymers of polycyclic compds., resist compn. and **patterning process**)

IT 398488-19-2P 398488-20-5P 398488-21-6P 398488-22-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(monomer; polymers of polycyclic compds., resist compn. and **patterning process**)

IT 441071-33-6P 441071-34-7P 441071-36-9P 441071-39-2P 441071-42-7P

441071-45-0P 441071-47-2P 441071-49-4P 441071-50-7P

441071-51-8P 441071-53-0P 441071-57-4P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polymers of polycyclic compds., **resist compn. and patterning process**)

IT 96-48-0, .gamma.-Butyrolactone 108-24-7, Acetic anhydride 5061-21-2,

.alpha.-Bromo-.gamma.-butyrolactone 5453-80-5, 5-Norbornene-2-carbaldehyde 80376-88-1, Bicyclo[2.2.1]hept-5-ene-2-acetaldehyde

RL: RCT (Reactant); RACT (Reactant or reagent)

(polymers of polycyclic compds., resist compn. and **patterning process**)

L30 ANSWER 23 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:368020 CAPLUS

DOCUMENT NUMBER: 136:393268

KOROMA EIC1700



TITLE: Positive-working resist compositions containing sulfonic acid generators

INVENTOR(S): Kodama, Kunihiro; Nishiyama, Fumiyuki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002139838	A2	20020517	JP 2000-332802	20001031

PRIORITY APPLN. INFO.: JP 2000-332802 20001031

AB The compns., which show high sensitivity, high resolu., and improved **process** latitude, and give resist **pattern** with good rectangular profile, contain (a) compds. which generate sulfonic acids having alkyl group substituted with .gtoreq.1 F upon irradiation with actinic ray and (b) resins having a repeating unit [CH<sub>2</sub>CHR<sub>1</sub>(C<sub>6</sub>H<sub>4</sub>OCR<sub>2</sub>R<sub>3</sub>OR)] [R<sub>1</sub> = H, alkyl, halo; R<sub>2</sub>, R<sub>3</sub> = H, alkyl; R = (un)substituted C.gtoeq.5 alicyclic hydrocarbyl, (un)substituted C.gtoeq.6 aryl, (un)substituted C.gtoeq.4 heterocyclyl, (CH<sub>2</sub>)<sub>n</sub>XR<sub>4</sub> (n = 1-3; X = direct bond, linking group; R<sub>4</sub> = any group given for R); .gtoreq.2 of R, R<sub>2</sub>, and R<sub>3</sub> may be bonded together to form a ring] which are decomposed by acids and show increased sol. in an alk. developer. The compns. may additionally contain (c) dissoln. inhibitors with mol. wt. .ltoreq.3000 which have acid-decomposable group and show increased dissoln. rate in an alk. developer upon action of acids, (d) N-contg. basic compds. and/or basic onium salts, and (e) F-contg. surfactants and/or silicone surfactants.

IT 159296-87-4DP, tert-Butyl acrylate-p-vinylphenol copolymer, reaction products with iso-Bu vinyl ether 159296-87-4P, tert-Butyl acrylate-p-vinylphenol copolymer 200808-68-0P, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer 287381-58-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(pos.-working **resist compns.** contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)

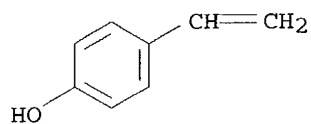
RN 159296-87-4 CAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

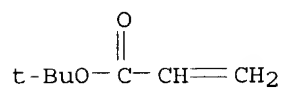
CMF C8 H8 O



CM 2

CRN 1663-39-4

CMF C7 H12 O2



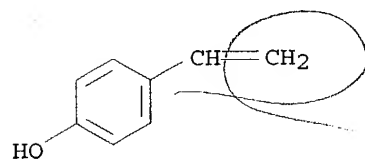
RN 159296-87-4 CAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 4-ethenylphenol  
(9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

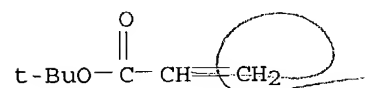
CMF C8 H8 O



CM 2

CRN 1663-39-4

CMF C7 H12 O2

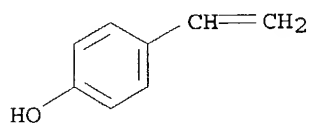


RN 200808-68-0 CAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylbenzene and  
4-ethenylphenol (9CI) (CA INDEX NAME)

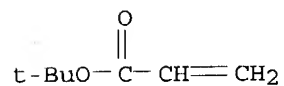
CM 1

CRN 2628-17-3  
CMF C8 H8 O



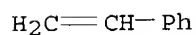
CM 2

CRN 1663-39-4  
CMF C7 H12 O2



CM 3

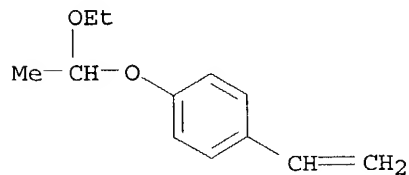
CRN 100-42-5  
CMF C8 H8



RN 287381-58-2 CAPLUS  
CN 2-Propenoic acid, cyclohexyl ester, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

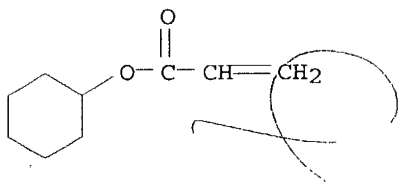
CRN 157057-20-0  
CMF C12 H16 O2



CM 2

CRN 3066-71-5

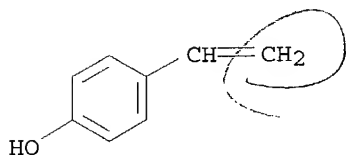
CMF C9 H14 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



- IC ICM G03F007-039  
ICS C08F012-24; C08K005-42; C08L025-18; C08L083-04; G03F007-004;  
H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST pos resist fluoroalkanesulfonic acid generator polyhydroxystyrene ether
- IT Positive photoresists  
(UV, far-; pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)
- IT Electron beam resists  
Resists  
(pos.-working; pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)
- IT 153698-63-6  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dissoln. inhibitor; pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)
- IT 3744-08-9P, Triphenylsulfonium iodide  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(in prepn. of photoacid generator; pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having

- alicyclic or (hetero)arom. group)
- IT 71-43-2, Benzene, reactions 945-51-7, Diphenyl sulfoxide 1763-23-1, Perfluoro-n-octanesulfonic acid 4270-70-6, Triphenylsulfonium chloride 25628-17-5 52908-55-1 194999-85-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in prepn. of photoacid generator; pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)
- IT 14159-45-6P 39153-56-5P 138529-81-4P 138529-84-7P 144089-15-6P, Triphenylsulfonium perfluorooctanesulfonate 153698-46-5P 179419-32-0P 193345-23-2P 197447-16-8P 241806-75-7P 252937-66-9P 297742-41-7P 338445-29-7P 338445-31-1P 365971-70-6P 365971-84-2P 365971-85-3P 376357-77-6P 376357-89-0P 389859-76-1P 405284-05-1P 425670-82-2P 425670-97-9P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)
- IT 66003-78-9 144317-44-2 213740-80-8 241806-76-8 258872-05-8 284474-28-8 312386-77-9 391232-40-9 398141-17-8 398141-18-9 414911-27-6 414911-28-7 414911-33-4 425670-52-6 425670-55-9 425670-64-0 425670-70-8 425670-73-1 425670-76-4  
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
 (pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)
- IT 102-82-9P, Tri-n-butylamine 108-24-7DP, Acetic anhydride, reaction products with poly(p-hydroxystyrene) ethers 109-53-5DP, Isobutyl vinyl ether, reaction products with Bu acrylate-hydroxystyrene copolymer 926-02-3DP, tert-Butyl vinyl ether, reaction products with poly(hydroxystyrene) and cyclohexaneethanol 3040-44-6P, 1-Piperidineethanol 4442-79-9DP, Cyclohexaneethanol, reaction products with poly(hydroxystyrene) and tert-Bu vinyl ether 24979-70-2DP, VP 8000, reaction products with cyclohexaneethanol, tert-Bu vinyl ether, and 147625-42-1P, Poly(p-hydroxystyrene) tert-butyl carbonate 158593-28-3P, p-(1-Ethoxyethoxy)styrene-p-hydroxystyrene copolymer **159296-87-4DP**, tert-Butyl acrylate-p-vinylphenol copolymer, reaction products with iso-Bu vinyl ether **159296-87-4P**, tert-Butyl acrylate-p-vinylphenol copolymer 199432-81-0P 199432-82-1P, p-Hydroxystyrene-p-(1-isobutoxyethoxy)styrene copolymer **200808-68-0P**, tert-Butyl acrylate-p-hydroxystyrene-styrene copolymer **287381-58-2P** 288620-15-5P, p-(1-Benzoyloxyethoxy)styrene-p-hydroxystyrene copolymer 289706-85-0P, p-Acetoxystyrene-p-hydroxystyrene-p-(1-phenethyloxyethoxy)styrene copolymer 325143-37-1P, p-tert-Butylstyrene-p-[1-(cyclohexylethoxy)ethoxy]styrene-p-hydroxystyrene copolymer 326592-04-5P 398457-05-1P 425671-10-9P, p-Acetoxystyrene-p-[1-(4-tert-butylcyclohexyl)carboxyethoxy]styrene-p-hydroxystyrene copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (pos.-working resist compns. contg.

fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)  
 IT 304-88-1, N-Benzoyl-N-phenylhydroxylamine 484-47-9, 2,4,5-Triphenylimidazole 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 19600-49-8, Triphenylsulfonium acetate  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (pos.-working resist compns. contg. fluoroalkanesulfonic acid generators and poly(hydroxystyrenes) having alicyclic or (hetero)arom. group)

L30 ANSWER 24 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:349215 CAPLUS

DOCUMENT NUMBER: 136:361832

TITLE: Resist composition and **patterning process**

INVENTOR(S): Takeda, Takanobu; Hatakeyama, Jun; Watanabe, Osamu; Kubota, Hiroshi

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

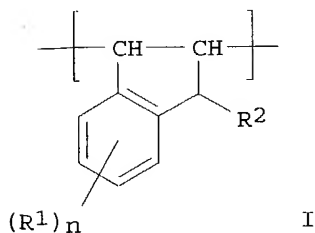
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1204001	A1	20020508	EP 2001-309168	20011030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002202610	A2	20020719	JP 2001-325907	20011024
US 2002081521	A1	20020627	US 2001-984726	20011031
PRIORITY APPLN. INFO.:			JP 2000-334340	A 20001101

GI



AB The present invention relates to a polymer comprising recurring units of I (R1,2 = H, hydroxyl, hydroxyalkyl, alkyl, alkoxy or halogen; n = 0-4) and

recurring units having acid labile groups which units increase alkali soly. as a result of the acid labile groups being decompd. under the action of acid, with a Mw of 1,000-500,000. The polymer is useful as a base resin to form a chem. amplified, pos. photoresist compn. which has advantages including a significantly enhanced contrast of alkali dissoln. rate before and after exposure, high sensitivity, high resoln., and high etching resistance and is best suited as a micropatterning material for use in VLSI manuf.

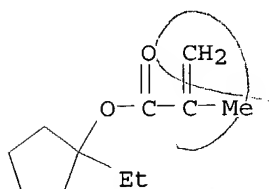
IT 420808-53-3DP, Acetoxystyrene-1-ethylcyclopentyl methacrylate-indene copolymer, hydrolyzed 420808-55-5DP, Acetoxystyrene-tert-butyl methacrylate-indene copolymer, hydrolyzed 420808-59-9P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoresist compn. and patterning process contg.)

RN 420808-53-3 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with ethenylphenyl acetate and 1H-indene (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

CMF C11 H18 O2



CM 2

CRN 59858-52-5

CMF C10 H10 O2

CCI IDS



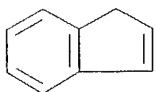
D1-CH=CH2

D1-O-Ac

CM 3

CRN 95-13-6

CMF C9 H8



RN 420808-55-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with ethenylphenyl acetate and 1H-indene (9CI) (CA INDEX NAME)

CM 1

CRN 59858-52-5

CMF C10 H10 O2

CCI IDS



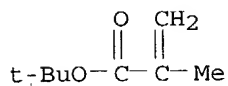
D1-CH=CH<sub>2</sub>

D1-O-Ac

CM 2

CRN 585-07-9

CMF C8 H14 O2



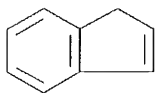
CM 3

CRN 95-13-6

KOROMA EIC1700



CMF C9 H8



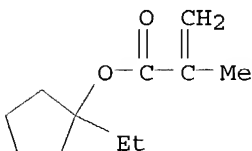
RN 420808-59-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 1H-inden-5-ol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

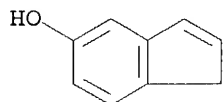
CMF C11 H18 O2



CM 2

CRN 3372-88-1

CMF C9 H8 O



IC ICM G03F007-039

ICS G03F007-004; C08F232-08; C08F212-14

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 76

ST photoresist photolithog compn VLSI

IT Photolithography

(UV; photoresist compn. and **patterning process**)

IT Photoresists

(photoresist compn. and **patterning process**)

IT 3235-51-6, Tris(2-methoxyethyl)amine

RL: TEM (Technical or engineered material use); USES (Uses)

(basic compd.; photoresist compn. and **patterning process** contg.)

KOROMA EIC1700

- IT 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane 326925-52-4  
362479-02-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generator; photoresist compn. and **patterning process** contg.)
- IT 420808-53-3DP, Acetoxystyrene-1-ethylcyclopentyl methacrylate-indene copolymer, hydrolyzed 420808-55-5DP, Acetoxystyrene-tert-butyl methacrylate-indene copolymer, hydrolyzed 420808-57-7DP, Acetoxystyrene-indene copolymer, hydrolyzed, reaction product with Bu chloroacetate 420808-59-9P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photoresist compn. and **patterning process** contg.)
- IT 107-59-5DP, tert-Butyl chloroacetate, reaction product with hydroxystyrene  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photoresist compn. and **patterning process** contg.)
- IT 97-64-3, Ethyl lactate 84540-57-8, Propylene glycol methyl ether acetate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; photoresist compn. and **patterning process** contg.)
- IT 11114-17-3, FC-430 96231-87-7, Surflon S-381  
RL: TEM (Technical or engineered material use); USES (Uses)  
(surfactant; photoresist compn. and **patterning process** contg.)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 25 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:332603 CAPLUS

DOCUMENT NUMBER: 136:348312

TITLE: Resist compositions comprising acrylate fluorinated resin and **patterning process**

INVENTOR(S): Harada, Yuji; Watanabe, Jun; Hatakeyama, Jun; Kawai, Yoshio; Sasago, Masaru; Endo, Masayuki; Kishimura, Shinji; Ootani, Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda, Kazuhiko

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002051936	A1	20020502	US 2001-947765	20010907
US 6582880	B2	20030624		
JP 2002155118	A2	20020528	JP 2001-266869	20010904
PRIORITY APPLN. INFO.:			JP 2000-271205 A	20000907

AB Disclosed is an acrylate resin contg. fluorinated alkyl groups in ester side chains that has high transmittance to VUV radiation. A resist compn. using the resin of the invention as a base polymer is sensitive to high-energy radiation, has excellent sensitivity and resolu., and is suited for lithog. microprocessing.

IT 417704-57-5P 417704-58-6P 417704-59-7P  
417704-60-0P 417704-61-1P 417704-62-2P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(resist compns. comprising acrylate fluorinated resin and patterning process)

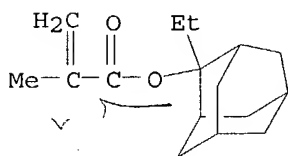
RN 417704-57-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

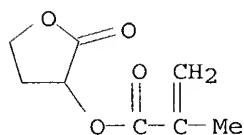
CMF C16 H24 O2



CM 2

CRN 195000-66-9

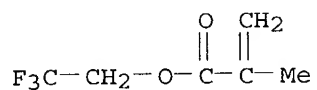
CMF C8 H10 O4



CM 3

CRN 352-87-4

CMF C6 H7 F3 O2



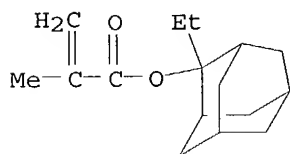
RN 417704-58-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and  
2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA  
INDEX NAME)

CM 1

CRN 209982-56-9

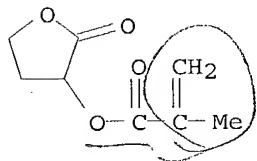
CMF C16 H24 O2



CM 2

CRN 195000-66-9

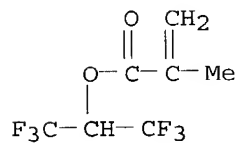
CMF C8 H10 O4



CM 3

CRN 3063-94-3

CMF C7 H6 F6 O2



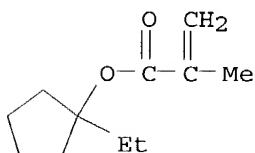
KOROMA EIC1700

RN 417704-59-7 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
 tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 2,2,2-trifluoroethyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

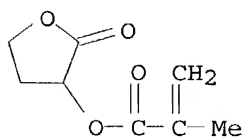
CMF C11 H18 O2



CM 2

CRN 195000-66-9

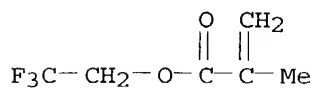
CMF C8 H10 O4



CM 3

CRN 352-87-4

CMF C6 H7 F3 O2

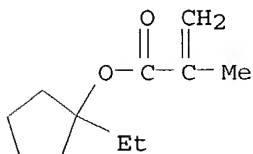


RN 417704-60-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
 tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-  
 (trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

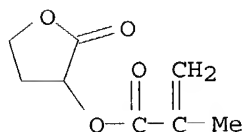
CM 1

CRN 266308-58-1  
CMF C11 H18 O2



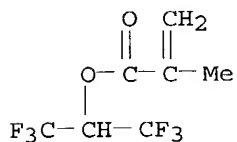
CM 2

CRN 195000-66-9  
CMF C8 H10 O4



CM 3

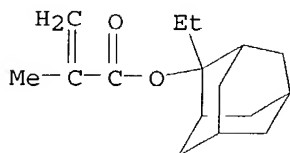
CRN 3063-94-3  
CMF C7 H6 F6 O2



RN 417704-61-1 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-hydroxyethyl 2-methyl-2-propenoate and 2,2,2-trifluoroethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

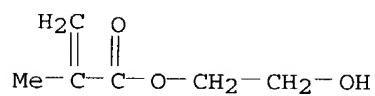
CRN 209982-56-9  
CMF C16 H24 O2



CM 2

CRN 868-77-9

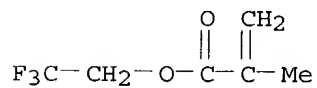
CMF C6 H10 O3



CM 3

CRN 352-87-4

CMF C6 H7 F3 O2



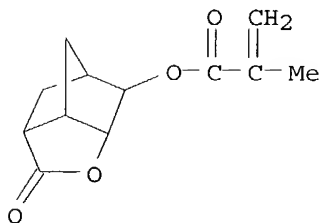
RN 417704-62-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl  
2-methyl-2-propenoate and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 254900-07-7

CMF C12 H14 O4

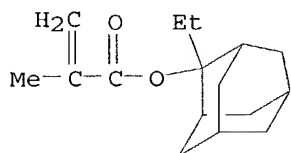


KOROMA EIC1700

CM 2

CRN 209982-56-9

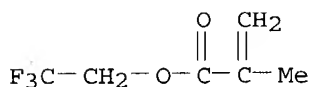
CMF C16 H24 O2



CM 3

CRN 352-87-4

CMF C6 H7 F3 O2



IC ICM G03F007-038

ICS G03F007-20; G03F007-30; G03F007-38; G03F007-40

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37, 38

ST acrylate fluorinated resin pos photoresist resist photolithog

IT Photolithography

(UV; resist compns. comprising acrylate fluorinated resin and **patterning process**)

IT Resists

(chem. amplified; resist compns. comprising acrylate fluorinated resin and **patterning process**)

IT Positive photoresists

(resist compns. comprising acrylate fluorinated resin and **patterning process**)

IT 195000-66-9DP, polymer with 2-ethyladamantyl methacrylate and 2,2,2-trifluoroethyl .alpha.-trifluoromethylarylate 209982-56-9DP, polymer with .alpha.-methacryloyloxy-.gamma.-butyrolactone and 2,2,2-trifluoroethyl .alpha.-trifluoromethylarylate **417704-57-5P 417704-58-6P 417704-59-7P 417704-60-0P 417704-61-1P 417704-62-2P**

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**resist compns.** comprising acrylate fluorinated

KOROMA EIC1700



resin and patterning process)

L30 ANSWER 26 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:332602 CAPLUS

DOCUMENT NUMBER: 136:348311

TITLE: Resist compositions and **patterning process**

INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Watanabe, Jun; Kawai, Yoshio; Sasago, Masaru; Endo, Masayuki; Kishimura, Shinji; Ootani, Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda, Kazuhiko

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 30 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002051935	A1	20020502	US 2001-947504	20010907
JP 2002156763	A2	20020531	JP 2001-266752	20010904

PRIORITY APPLN. INFO.: JP 2000-271202 A 20000907

AB The present invention relates to a photoresist compn. comprising (A) a polymer comprising recurring units having an alicyclic hydrocarbon backbone to which a carboxylate moiety capable of generating carboxylic acid when decompd. under acidic conditions is attached through a C1-20 alkylene spacer; (B) a photoacid generator; and (C) an org. solvent. The invention photoresist compn. is sensitive to high-energy radiation, and has excellent sensitivity and resoln. at a wavelength < 180 nm, and good plasma etching resistance. The inventive resist compn. is used as a resist at the exposure wavelength of a F2 excimer laser to form finely defined pattern, that makes the resist ideal as a micropatterning material in VLSI fabrication.

IT 250378-10-0 418760-25-5 418760-29-9  
418760-37-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(resin; **photoresist compns. and patterning process** contg.)

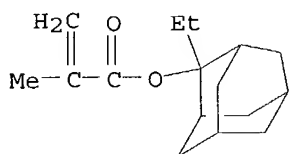
RN 250378-10-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

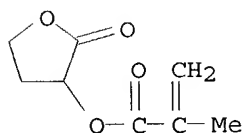
CMF C16 H24 O2



CM 2

CRN 195000-66-9

CMF C8 H10 O4



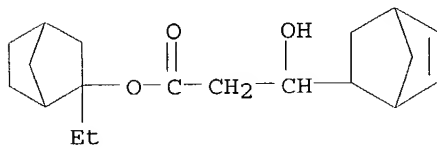
RN 418760-25-5 CAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-propanoic acid, .beta.-hydroxy-,  
2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione (9CI)  
(CA INDEX NAME)

CM 1

CRN 418760-24-4

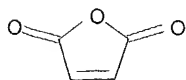
CMF C19 H28 O3



CM 2

CRN 108-31-6

CMF C4 H2 O3



KOROMA EIC1700

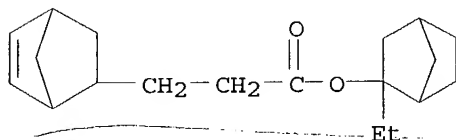
RN 418760-29-9 CAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-propanoic acid, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 418760-28-8

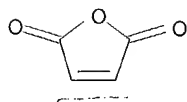
CMF C19 H28 O2



CM 2

CRN 108-31-6

CMF C4 H2 O3



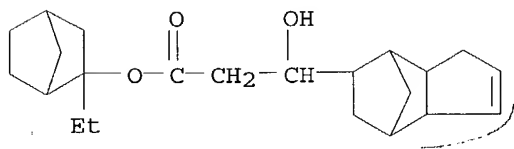
RN 418760-37-9 CAPLUS

CN 4,7-Methano-1H-indene-6-propanoic acid, 3a,4,5,6,7,7a-hexahydro-.beta.-hydroxy-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 418760-36-8

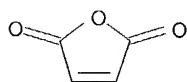
CMF C22 H32 O3



CM 2

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-038  
ICS G03F007-38; G03F007-40; G03F007-30

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 76

ST photoresist compn photolithog UV VLSI fabrication

IT Photolithography  
(UV; photoresist compns. and **patterning process** for)

IT Photoresists  
(photoresist compns. and **patterning process**)

IT Integrated circuits  
(photoresist compns. and **patterning process** for)

IT 102-82-9, Tributylamine  
RL: TEM (Technical or engineered material use); USES (Uses)  
(basic compd.; photoresist compns. and **patterning process** contg.)

IT 66003-76-7, Diphenyliodonium triflate 66003-78-9, Triphenylsulfonium triflate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generator; photoresist compns. and **patterning process** contg.)

IT 250378-10-0 330596-02-6 369632-58-6 418760-25-5  
418760-26-6 418760-29-9 418760-32-4 418760-34-6  
418760-37-9 418760-40-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(resin; **photoresist compns. and patterning process** contg.)

IT 84540-57-8, Propylene glycol monomethyl ether acetate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; photoresist compns. and **patterning process** contg.)

L30 ANSWER 27 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:315396 CAPLUS

DOCUMENT NUMBER: 136:332786

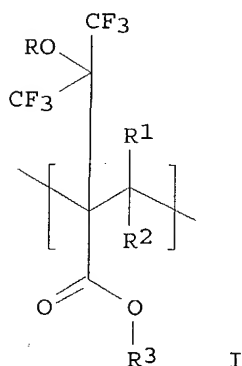
TITLE: Polymers, resist compositions and **patterning process**

INVENTOR(S): Harada, Yuji; Hatakeyama, Jun; Watanabe, Jun; Kawai, Yoshio; Sasago, Masaru; Endo, Masayuki; Kishimura, Shinji; Ootani, Michitaka; Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda, Kazuhiko

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan; Matsushita Electrical Industrial Co., Ltd.; Central Glass Co.,

SOURCE: Ltd.  
U.S. Pat. Appl. Publ., 20 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002048724	A1	20020425	US 2001-947764	20010907
US 6511787	B2	20030128		
JP 2002155112	A2	20020528	JP 2001-266846	20010904
PRIORITY APPLN. INFO.: GI			JP 2000-271234 A	20000907



AB The present invention relates to an acrylic resin I (R = H, acid labile group, alkyl, C1-20 fluorinated alkyl, acyl, acyl having fluorinated alkyl moiety; R1,2 = H, F; R3 = acid labile group, adhesive group, alkyl, C1-20 fluorinated alkyl) which has high transmittance to VUV radiation. The invention provides a resist compn. using the acrylic resin as a base polymer which has high transparency, substrate adhesion, alkali develop-ability and acid-elimination capability and is suited for lithog. microprocessing.

IT 415683-21-5P 415683-23-7P 415683-25-9P  
415683-26-0P 415683-27-1P 415683-30-6P  
415683-33-9P 415683-34-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymers for photoresist compns. and  
patterning process)

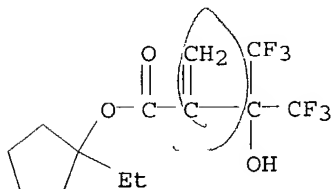
RN 415683-21-5 CAPLUS

CN Butanoic acid, 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-20-4

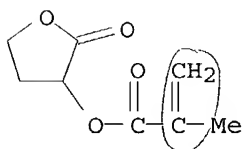
CMF C13 H16 F6 O3



CM 2

CRN 195000-66-9

CMF C8 H10 O4



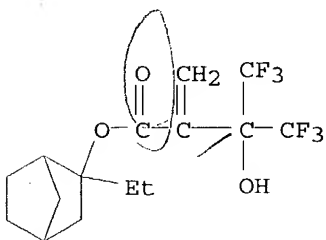
RN 415683-23-7 CAPLUS

CN Butanoic acid, 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-22-6

CMF C15 H18 F6 O3

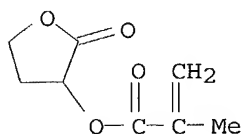


CM 2

CRN 195000-66-9

CMF C8 H10 O4

KOROMA EIC1700



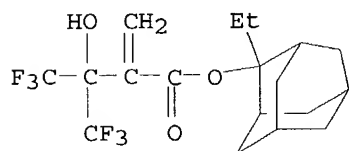
RN 415683-25-9 CAPLUS

CN Butanoic acid, 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-24-8

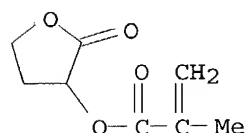
CMF C18 H22 F6 O3



CM 2

CRN 195000-66-9

CMF C8 H10 O4



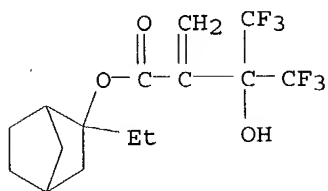
RN 415683-26-0 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2-ethylbicyclo[2.2.1]hept-2-yl 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)butanoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-22-6

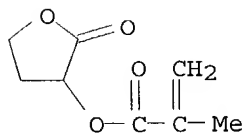
CMF C15 H18 F6 O3



CM 2

CRN 195000-66-9

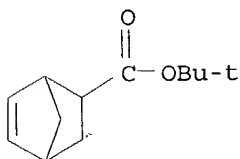
CMF C8 H10 O4



CM 3

CRN 154970-45-3

CMF C12 H18 O2



RN 415683-27-1 CAPLUS

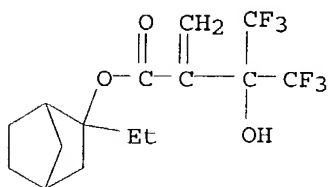
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2-ethylbicyclo[2.2.1]hept-2-yl 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)butanoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 415683-22-6

CMF C15 H18 F6 O3

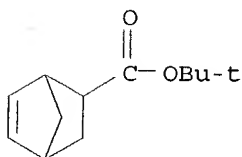




CM 2

CRN 154970-45-3

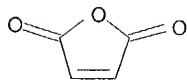
CMF C12 H18 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



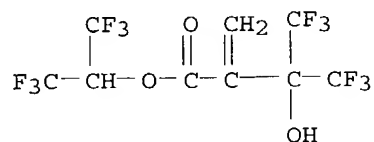
RN 415683-30-6 CAPLUS

CN Butanoic acid, 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)-, 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)butanoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)butanoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-29-3

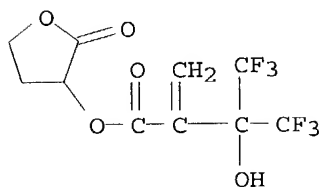
CMF C9 H4 F12 O3



CM 2

CRN 415683-28-2

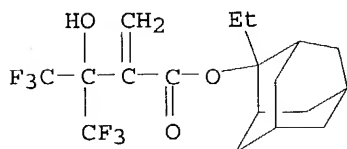
CMF C10 H8 F6 O5



CM 3

CRN 415683-24-8

CMF C18 H22 F6 O3



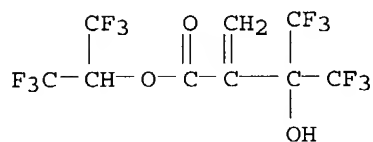
RN 415683-33-9 CAPLUS

CN Butanoic acid, 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)-, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-29-3

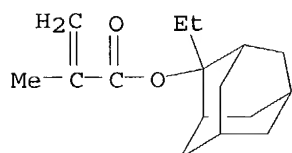
CMF C9 H4 F12 O3



CM 2

CRN 209982-56-9

CMF C16 H24 O2



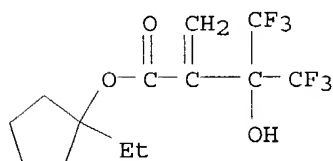
RN 415683-34-0 CAPLUS

CN Butanoic acid, 4,4,4-trifluoro-3-hydroxy-2-methylene-3-(trifluoromethyl)-, 1-ethylcyclopentyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 415683-20-4

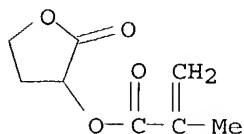
CMF C13 H16 F6 O3



CM 2

CRN 195000-66-9

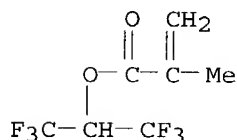
CMF C8 H10 O4



CM 3

CRN 3063-94-3

CMF C7 H6 F6 O2

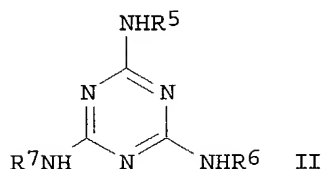
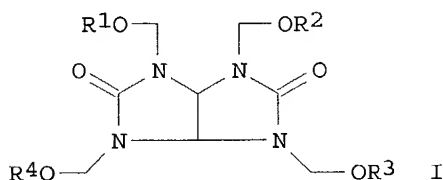


IC ICM G03F007-004  
ICS G03F007-26; C08J003-28  
NCL 430270100  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
ST photoresist patterning photolithog resin  
IT Photolithography  
(UV; polymers for photoresist compns. and **patterning process**)  
IT Photoresists  
(polymers for photoresist compns. and **patterning process**)  
IT 109-92-2DP, Ethyl vinyl ether, reaction product with hydroxyl group contg. polymer 415683-21-5P 415683-23-7P 415683-25-9P 415683-26-0P 415683-27-1P 415683-30-6P 415683-32-8DP, reaction product with Et vinyl ether 415683-33-9P 415683-34-0P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymers for **photoresist compns. and patterning process**)

L30 ANSWER 28 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 2002:315395 CAPLUS  
DOCUMENT NUMBER: 136:332785  
TITLE: Photoresist composition for resist flow process  
INVENTOR(S): Lee, Geun Su; Kim, Jin Soo; Jung, Jae Chang; Jung, Min Ho; Baik, Ki Ho  
PATENT ASSIGNEE(S): S. Korea

SOURCE: U.S. Pat. Appl. Publ., 17 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002048723	A1	20020425	US 2001-947625	20010906
JP 2002139840	A2	20020517	JP 2001-273971	20010910
PRIORITY APPLN. INFO.: GI			KR 2000-62267	A 20001023



AB Disclosed is a photoresist compn. for a resist flow process and a method for forming a contact hole using the photoresist. When a photoresist compn. comprising a crosslinking agent of the formula I or formula II (R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = H, C<sub>1</sub>-10-alkyl.; R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> = H, C<sub>1</sub>-10-alkyl, C<sub>1</sub>-10-alkoxy.) is used for a photoresist **pattern formation process**, it improves resist flow properties, L/S pattern resolu. and contrast ratio. Photoresist compns. of the present invention allow formation of a uniformly sized contact holes below 100 nm and also reduces or eliminates standing wave effect.

IT 200808-68-0

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photoresist compn. for resist flow process)

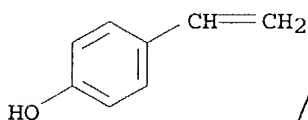
RN 200808-68-0 CAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

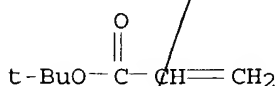
CMF C8 H8 O



CM 2

CRN 1663-39-4

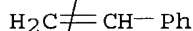
CMF C7 H12 O2



CM 3

CRN 100-42-5

CMF C8 H8



IC ICM G03F007-004

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST resist flow process photoresist compn photolithog

IT Photolithography

Photoresists

(photoresist compn. for resist flow process)

IT Semiconductor device fabrication

(photoresist compn. for resist flow process in relation to)

IT 108-78-1, Melamine, processes 15968-37-3

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(crosslinking agent; photoresist compn. for resist flow process)

IT 66003-78-9, Triphenylsulfonium triflate

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photoacid generator; photoresist compn. for resist flow process)

IT 177034-67-2 200808-68-0 348108-57-6 414903-20-1

RL: CPS (Chemical process); PEP (Physical, engineering or chemical

process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photoresist compn. for resist flow process)

IT 84540-57-8, Propylene glycol methyl ether acetate  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(solvent; photoresist compn. for resist flow process)

L30 ANSWER 29 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:294153 CAPLUS

DOCUMENT NUMBER: 136:316938

TITLE: Positive resist composition and **process** for forming resist **pattern** using photosensitive laminate

INVENTOR(S): Okubo, Waki; Sato, Kazufumi; Nitta, Kazuyuki; Ogata, Toshiyuki

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U.S. Ser. No. 651,099.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002045123	A1	20020418	US 2001-799549	20010307
JP 2001142217	A2	20010525	JP 2000-263211	20000831
PRIORITY APPLN. INFO.:			JP 1999-245684	A 19990831
			US 2000-651099	A2 20000830
			JP 2000-263211	A 20000831

OTHER SOURCE(S): MARPAT 136:316938

AB The present invention relates to a photosensitive laminate including a substrate and a 500-5800 angstroms thick photoresist layer formed on the substrate. A compn. for the resist layer includes (A) a compd. which generates an acid upon irradiation with radioactive ray; (B) an alkali-sol. novolak resin; and (C) a compd. having at least one acid-decomposable dissoln.-inhibiting group, and the dissoln.-inhibiting group is decomposable by action of an acid generated from the ingredient (A) to yield an org. carboxylic acid. This photosensitive laminate is sequentially subjected to selective exposure to KrF excimer laser light or to light having a short wavelength equal to or less than that of F2 laser, post-exposure baking, and developing with an alkali to yield a resist pattern.

IT 175284-06-7, tert-Butyl acrylate-hydroxystyrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(pos. resist compn. and **process** for forming **resist pattern** using photosensitive laminate contg.)

RN 175284-06-7 CAPLUS  
 CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylphenol  
 (9CI) (CA INDEX NAME)

CM 1

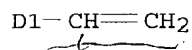
CRN 31257-96-2

CMF C8 H8 O

CCI IDS



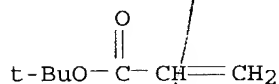
D1-OH



CM 2

CRN 1663-39-4

CMF C7 H12 O2



IC ICM G03F007-039

ICS G03F007-30

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76

ST photoresist compn photolithog photosensitive laminate

IT Photolithography

(UV; pos. resist compn. and **process** for forming resist **pattern** using photosensitive laminate)

IT Positive photoresists

(pos. resist compn. and **process** for forming resist **pattern** using photosensitive laminate)

IT 194999-85-4, Bis(4-tert-butylphenyl)iodonium nonafluorobutanesulfonate

RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoacid generator; pos. resist compn. and **process** for forming resist **pattern** using photosensitive laminate)

KOROMA EIC1700



IT 65-85-0D, Benzoic acid, ethoxyethyloxycarbonyl group substituted  
69-72-7, Salicylic acid, uses 102-71-6, Triethanolamine, uses  
122-20-3, Triisopropanolamine 5292-43-3D, tert-Butyl bromoacetate,  
reaction product with Bis(3-cyclohexyl-4-hydroxy-6-methylphenyl)-4-  
hydroxyphenylmethane 66003-78-9, Triphenylsulfonium  
trifluoromethanesulfonate 154722-64-2D, part of hydroxyl group  
substituted by butoxycarbonylmethyloxy groups 169965-90-6, Lithocholic  
acid tert-Butyl ester 175284-06-7, tert-Butyl  
acrylate-hydroxystyrene copolymer 220179-78-2 340755-41-1  
340755-42-2

RL: TEM (Technical or engineered material use); USES (Uses)  
(pos. resist compn. and process for  
forming resist pattern using photosensitive  
laminate contg.)

IT 27029-76-1, Formaldehyde-m-cresol-p-cresol copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(resin; pos. resist compn. and process for forming resist  
pattern using photosensitive laminate)

L30 ANSWER 30 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:256608 CAPLUS

DOCUMENT NUMBER: 136:286603

TITLE: Resist pattern, process for  
producing the same, and utilization thereof

INVENTOR(S): Natori, Michiko; Hidaka, Takahiro

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

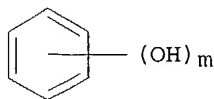
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

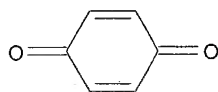
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002027407	A1	20020404	WO 2001-JP8356	20010926
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2001092244	A5	20020408	AU 2001-92244	20010926
JP 2003215799	A2	20030730	JP 2003-25896	20010926
PRIORITY APPLN. INFO.:			JP 2000-293255	A 20000927
			JP 2000-320168	A 20001020
			JP 2001-275523	A 20010911
			JP 2002-530924	A3 20010926
			WO 2001-JP8356	W 20010926

GI



I



II

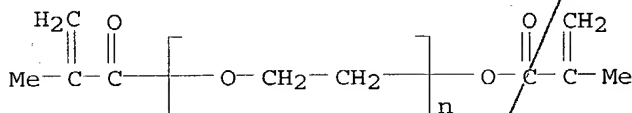
AB A resist pattern with which a fine wiring having a reduced conductor resistance can be formed and which is useful for forming semiconductor package substrate circuits at a higher d. The pattern has a film thickness of 1 to 100 .mu.m and an aspect ratio (ratio of the line width to the film thickness) of 3.5 or higher. The resist pattern can be produced, for example, from a photosensitive resin compn. comprising (A) a binder polymer, (B1) a photopolymerizable compd. having three ethylenically unsatd. bonds per mol., (C) a photopolymn. initiator, and (D) either or both of a compd. represented by the general formula I (m = 2-6) and the compd. represented by the general formula II.

IT 25852-47-5

RL: TEM (Technical or engineered material use); USES (Uses)  
(9G; **photoresist compn.** for producing  
**resist** pattern to fabricate semiconductor package substrate  
circuit)

RN 25852-47-5 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(2-methyl-1-oxo-2-propenyl)-.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)



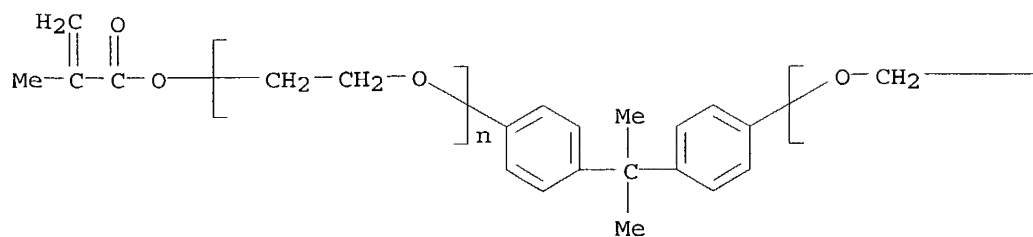
IT 41637-38-1, BP(EO) 14MA

RL: TEM (Technical or engineered material use); USES (Uses)  
(BPE 500, BP(EO) 14MA; **photoresist compn.** for  
producing **resist** pattern to fabricate semiconductor package  
substrate circuit)

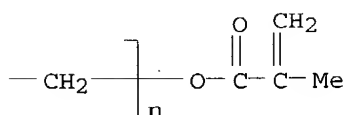
RN 41637-38-1 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

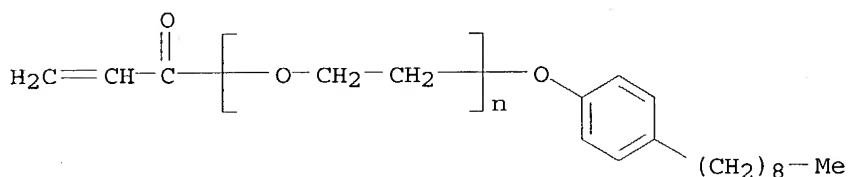


IT 2073-54-3

RL: TEM (Technical or engineered material use); USES (Uses)  
(NP 4EA, NP 8EA; **photoresist compn.** for producing  
**resist** pattern to fabricate semiconductor package substrate  
circuit)

RN 2073-54-3 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propenyl)-.omega.-(4-nonylphenoxy)- (9CI) (CA INDEX NAME)



IT 25035-81-8, Methyl methacrylate-methacrylic acid-styrene copolymer  
41686-44-6, Butyl methacrylate-ethyl acrylate-methacrylic  
acid-methyl methacrylate-styrene copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(binder; **photoresist compn.** for producing  
**resist** pattern to fabricate semiconductor package substrate  
circuit)

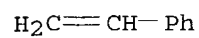
RN 25035-81-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene and methyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

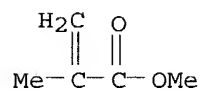
CMF C8 H8



CM 2

CRN 80-62-6

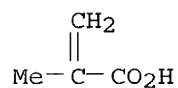
CMF C5 H8 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



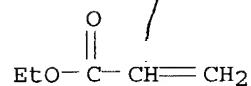
RN 41686-44-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, ethenylbenzene, ethyl 2-propenoate and methyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 140-88-5

CMF C5 H8 O2

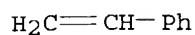


CM 2

CRN 100-42-5

CMF C8 H8

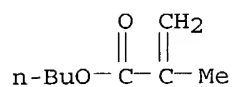
KOROMA EIC1700



CM 3

CRN 97-88-1

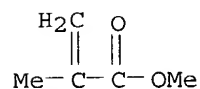
CMF C8 H14 O2



CM 4

CRN 80-62-6

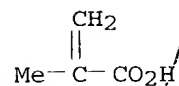
CMF C5 H8 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



IT 82727-34-2, TMPT 21E

RL: TEM (Technical or engineered material use); USES (Uses)

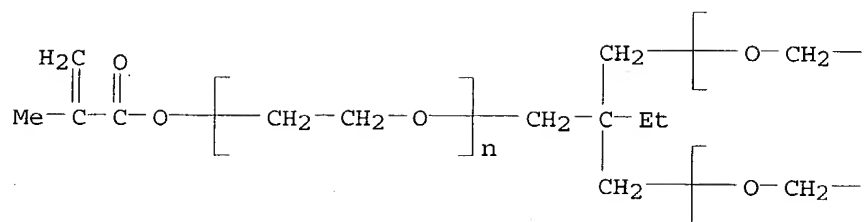
(photoresist compn. for producing resist

pattern to fabricate semiconductor package substrate circuit)

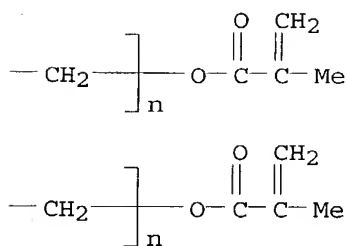
RN 82727-34-2 CAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1)  
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM G03F007-027  
ICS G03F007-004; G03F007-028; H01L021-027; H05K003-18; H05K003-06
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76
- ST photoresist pattern semiconductor device fabrication aspect ratio film thickness
- IT Photolithography  
Photoresists  
Semiconductor device fabrication  
(resist **pattern**, **process** for producing the same, and utilization thereof)
- IT 109-17-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(4G; photoresist compn. for producing resist pattern to fabricate semiconductor package substrate circuit)
- IT 25852-47-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(9G; **photoresist compn.** for producing **resist pattern** to fabricate semiconductor package substrate circuit)
- IT 25852-49-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(9PG; photoresist compn. for producing resist pattern to fabricate semiconductor package substrate circuit)
- IT 3524-68-3, A-TMM 3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(A-TMM 3; photoresist compn. for producing resist pattern to fabricate

semiconductor package substrate circuit)

IT 41637-38-1, BP(EO) 14MA  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (BPE 500, BP(EO) 14MA; **photoresist compn.** for  
 producing **resist** pattern to fabricate semiconductor package  
 substrate circuit)

IT 2073-54-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (NP 4EA, NP 8EA; **photoresist compn.** for producing  
**resist** pattern to fabricate semiconductor package substrate  
 circuit)

IT 25035-81-8, Methyl methacrylate-methacrylic acid-styrene copolymer  
 41686-44-6, Butyl methacrylate-ethyl acrylate-methacrylic  
 acid-methyl methacrylate-styrene copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (binder; **photoresist compn.** for producing  
**resist** pattern to fabricate semiconductor package substrate  
 circuit)

IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 1707-68-2,  
 2,2'-Bis(o-chlorophenyl)-4,4',5,5'-tetraphenylbisimidazole  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photopolymn. initiator; **photoresist compn.** for producing resist  
 pattern to fabricate semiconductor package substrate circuit)

IT 88-58-4, 2,5-Di-tert-butylhydroquinone 98-29-3, 4-tert-Butyl Catechol  
 120-80-9, Catechol, uses 128-37-0, 2,6-Di-tert-butyl-p-cresol, uses  
 603-48-5, Leuco crystal violet 82727-34-2, TMPT 21E  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**photoresist compn.** for producing **resist**  
 pattern to fabricate semiconductor package substrate circuit)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 31 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:796439 CAPLUS

DOCUMENT NUMBER: 135:338109

TITLE: Photoresist composition for flow **process**,  
 lithographic **pattern** formation, and  
 semiconductor device

INVENTOR(S): Kim, Jin Soo; Jung, Jae Chang; Lee, Geun Su; Baik, Ki  
 Ho

PATENT ASSIGNEE(S): Hynix Semiconductor Co., Ltd., S. Korea

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

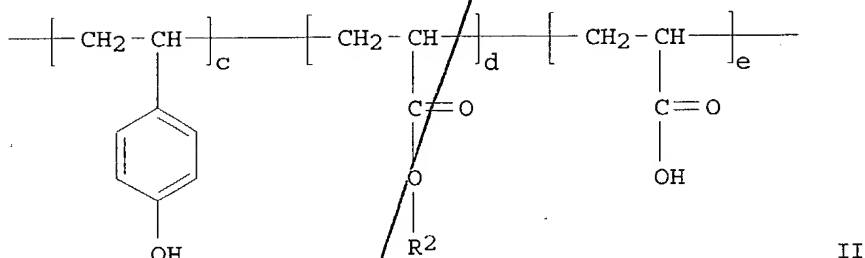
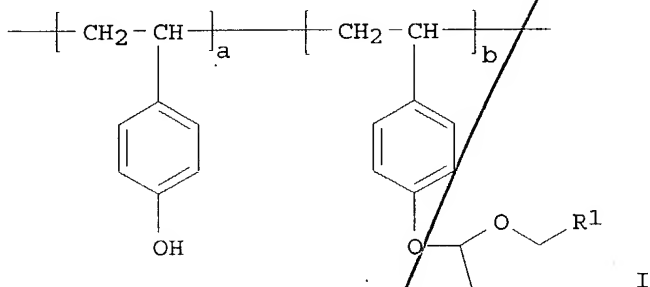
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001305738	A2	20011102	JP 2001-121485	20010419
GB 2361549	A1	20011024	GB 2001-9509	20010418

GB 2361549 B2 20030716  
 DE 10118976 A1 20011115  
 US 2002028405 A1 20020307  
 CN 1318773 A 20011024

DE 2001-10118976 20010418  
 US 2001-837394 20010418  
 CN 2001-115325 20010419  
 KR 2000-20809 A 20000419

PRIORITY APPLN. INFO.:  
 GI



AB A photoresist compn. contains a photoresist resin contg. a copolymer I (R1 = H, C1-10 alkyl, aryl; a:b = 20-80:20-80 mol.%) and a copolymer II (R2 = protective group releasing on acid; c:d:e = 30-70:28-50:2-15 mol.%), a photoacid generator, and an org. solvent. In lithog. pattern formation, the photoresist film is image-wise patterned to give 1st pattern, and flow baking is carried out to thermally flow the 1st pattern and give 2nd pattern. When the flow-baking temp. elevates to an undesired level, crosslinking between the two copolymers accompanied with esterification occurs to suppress overflow, so that fine 2nd pattern is precisely obtained. A semiconductor device fabricated by using the lithog. process is also claimed.

IT 194861-04-6, Acrylic acid-tert-butyl acrylate-4-hydroxystyrene copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(resist component; photoresist compn.)

contg. thermally crosslinkable multiple copolymers for flow-process lithog. pattern formation, and semiconductor device)

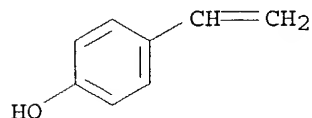


RN 194861-04-6 CAPLUS  
CN 2-Propenoic acid, polymer with 1,1-dimethylethyl 2-propenoate and  
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

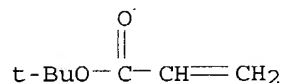
CMF C8 H8 O



CM 2

CRN 1663-39-4

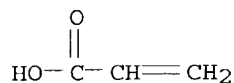
CMF C7 H12 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2



IC G03F007-039; C08F212-14; C08F220-10; C08K005-00; C08L025-18; C08L033-04;  
G03F007-40; H01L021-027

CC 76-14 (Electric Phenomena)

Section cross-reference(s): 74

ST flow process hydroxystyrene copolymer photoresist overflow prevention  
crosslinking; acrylic copolymer photoresist flow process prevention  
overflow crosslinking; esterification crosslinking hydroxystyrene  
copolymer photoresist flow process

IT Lithography

(flow process; photoresist compn. contg. thermally crosslinkable  
multiple copolymers for flow-process lithog. pattern  
formation, and semiconductor device)

KOROMA EIC1700

- IT Photoresists  
Semiconductor device fabrication  
(photoresist compn. contg. thermally crosslinkable multiple copolymers for flow-**process** lithog. **pattern** formation, and semiconductor device)
- IT Crosslinking  
(thermally; photoresist compn. contg. thermally crosslinkable multiple copolymers for flow-**process** lithog. **pattern** formation, and semiconductor device)
- IT 66003-78-9, Triphenylsulfonium triflate  
RL: MOA (Modifier or additive use); USES (Uses)  
(photoacid generator; photoresist compn. contg. thermally crosslinkable multiple copolymers for flow-**process** lithog. **pattern** formation, and semiconductor device)
- IT 109-93-3DP, Vinyl ether, reaction products with 4-vinylphenol homopolymer 24979-70-2DP, 4-Vinylphenol homopolymer, reaction products with vinyl ether  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(resist component; photoresist compn. contg. thermally crosslinkable multiple copolymers for flow-**process** lithog. **pattern** formation, and semiconductor device)
- IT 158593-28-3 194861-04-6, Acrylic acid-tert-butyl acrylate-4-hydroxystyrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**resist** component; **photoresist** compn. contg. thermally crosslinkable multiple copolymers for flow-**process** lithog. **pattern** formation, and semiconductor device)

L30 ANSWER 32 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:796371 CAPLUS

DOCUMENT NUMBER: 135:336916

TITLE: Polymers, resist compositions and **patterning process**

INVENTOR(S): Nishi, Tsunehiro; Tachibana, Seiichiro; Nakashima, Mutsuo; Kinsho, Takeshi; Watanabe, Takeru; Hasegawa, Koji; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 41 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1150167	A1	20011031	EP 2001-303906	20010430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002012631	A2	20020115	JP 2001-123986	20010423

US 2001051315

A1

20011213

US 2001-842113

20010426

US 6492090

B2

20021210

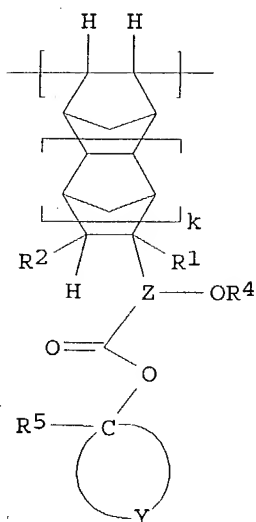
PRIORITY APPLN. INFO.:

JP 2000-129054

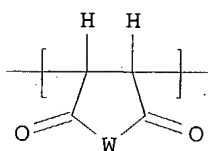
A

20000428

GI



I



II

AB The present invention provides a polymer having a Mw of 1,000-500,000 and comprising units of formulas I and II (R1= H, CH3 or CH2CO2R3; R2= H, CH3 or CO2R3; R3 = alkyl; R4 = H, alkyl, alkoxyalkyl or acyl; R5 = alkyl or aryl; Y = divalent hydrocarbon group which may contain a hetero atom and which forms a ring with the carbon atom; Z = trivalent hydrocarbon group; k = 0 or 1; and W = -O- or -(NR)- wherein R = H or alkyl). A resist compn. which comprises the polymer as a base resin is sensitive to high-energy radiation, has excellent sensitivity, resolu., and etching resistance, and lends itself to micropatterning with electron beams or deep-UV rays.

IT 369632-62-2P 369632-71-3P 369632-73-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. of polymer and resist compn. for patterning process)

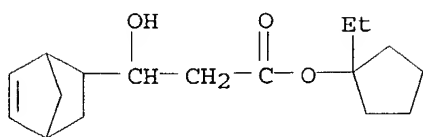
RN 369632-62-2 CAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-propanoic acid, .beta.-hydroxy-, 1-ethylcyclopentyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 369632-61-1

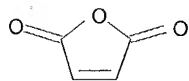
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CM 2

CRN 108-31-6

CMF C4 H2 O3



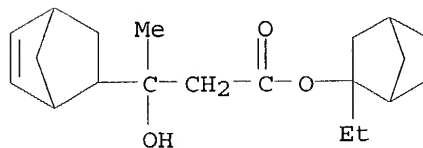
RN 369632-71-3 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .beta.-hydroxy-.beta.-methyl-,  
2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 1-ethylcyclohexyl  
2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 359635-33-9

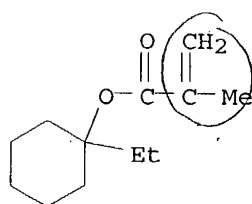
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CM 2

CRN 274248-09-8

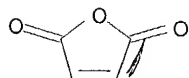
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CM 3

CRN 108-31-6

CMF C4 H2 O3



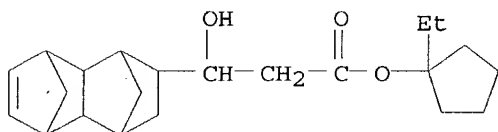
RN 369632-73-5 CAPLUS

CN 1,4:5,8-Dimethanonaphthalene-2-propanoic acid, 1,2,3,4,4a,5,8,8a-octahydro-.beta.-hydroxy-, 1-ethylcyclopentyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 369632-72-4

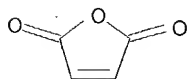
CMF C22 H32 O3



CM 2

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-039

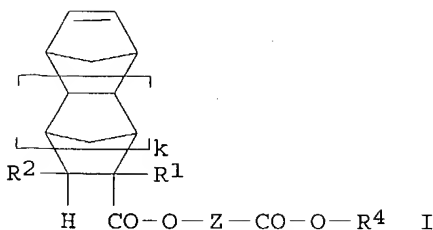
KOROMA EIC1700

ICS G03F007-004; C08F222-06; C08F232-08  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 ST photoresist resin patterning  
 IT Photolithography  
 Photoresists  
 (prepn. of polymer and resist compn. for **patterning process**)  
 IT 3742-80-1 5063-03-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of polymer and resist compn. for **patterning process**)  
 IT 369632-55-3P 369632-57-5P 369632-58-6P 369632-60-0P  
 369632-62-2P 369632-64-4P 369632-65-5P 369632-66-6P  
 369632-68-8P 369632-70-2P 369632-71-3P 369632-73-5P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of polymer and resist compn. for **patterning process**)  
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 33 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2001:796274 CAPLUS  
 DOCUMENT NUMBER: 135:336914  
 TITLE: Ester compounds, polymers, resist compositions and **patterning process**  
 INVENTOR(S): Hasegawa, Koji; Nishi, Tsunehiro; Kinsho, Takeshi; Watanabe, Takeru; Nakashima, Mutsuo; Tachibana, Seiichiro; Hatakeyama, Jun  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 45 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1149825	A2	20011031	EP 2001-303867	20010427
EP 1149825	A3	20030326		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002012622	A2	20020115	JP 2001-124005	20010423
US 2002007031	A1	20020117	US 2001-842007	20010426
US 6531627	B2	20030311		
US 2003088115	A1	20030508	US 2002-288514	20021106
PRIORITY APPLN. INFO.:			JP 2000-127532	A 20000427
			US 2001-842007	A3 20010426
OTHER SOURCE(S):		MARPAT 135:336914		

GI



AB The present invention provides an ester compd. of formula I (R<sup>1</sup> = H, Me or CH<sub>2</sub>CO<sub>2</sub>R<sub>3</sub>; R<sub>2</sub> = H, Me or CO<sub>2</sub>R<sub>3</sub>; R<sub>3</sub> = C<sub>1</sub>-15 alkyl, R<sub>4</sub> = branched or cyclic, tertiary C<sub>5</sub>-20 alkyl group; Z = divalent C<sub>1</sub>-10 hydrocarbon group; and k = 0 or 1). A photoresist compn. comprising as the base resin a polymer resulting from the ester compd. is sensitive to high-energy radiation, has excellent sensitivity, resoln., and etching resistance, and is suited for micropatterning using electron beams or deep-UV.

IT 370088-94-1P 370088-96-3P 370088-97-4P  
 370088-98-5P 370088-99-6P 370089-00-2P  
 370089-01-3P 370089-02-4P 370089-04-6P  
 370089-05-7P 370089-06-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of ester compd. and polymers for photoresist compns. and patterning process)

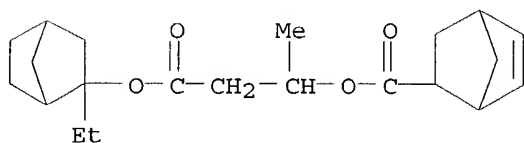
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CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(2-ethylbicyclo[2.2.1]hept-2-yl)oxy]-1-methyl-3-oxopropyl ester, polymer with 2,5-furandione (9CI)  
 (CA INDEX NAME)

CM 1

CRN 370088-88-3

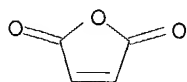
CMF C21 H30 O4



CM 2

CRN 108-31-6

CMF C4 H2 O3



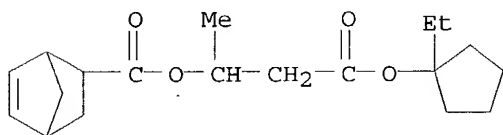
RN 370088-96-3 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(1-ethylcyclopentyl)oxy]-1-methyl-3-oxopropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 370088-90-7

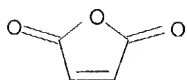
CMF C19 H28 O4



CM 2

CRN 108-31-6

CMF C4 H2 O3



RN 370088-97-4 CAPLUS

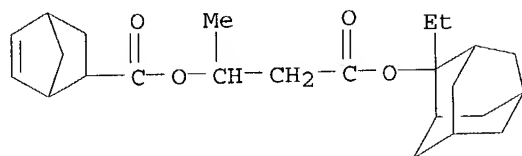
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(2-ethyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl)oxy]-1-methyl-3-oxopropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 370088-91-8

CMF C24 H34 O4

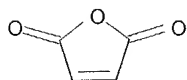




CM 2

CRN 108-31-6

CMF C4 H2 O3



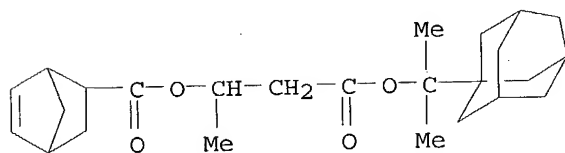
RN 370088-98-5 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1-methyl-3-(1-methyl-1-tricyclo[3.3.1.1.3,7]dec-1-ylethoxy)-3-oxopropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

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CRN 370088-92-9

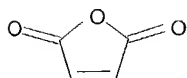
CMF C25 H36 O4



CM 2

CRN 108-31-6

CMF C4 H2 O3



RN 370088-99-6 CAPLUS

CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, 1,2,3,4,4a,5,8,8a-

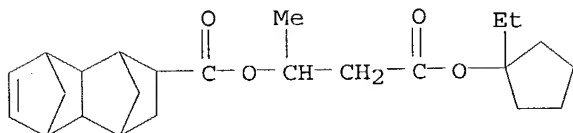
KOROMA EIC1700

octahydro-, 3-[(1-ethylcyclopentyl)oxy]-1-methyl-3-oxopropyl ester,  
polymer with 2,5-furandione (9CI) (CA INDEX NAME)

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CRN 370088-93-0

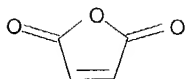
CMF C24 H34 O4



CM 2

CRN 108-31-6

CMF C4 H2 O3



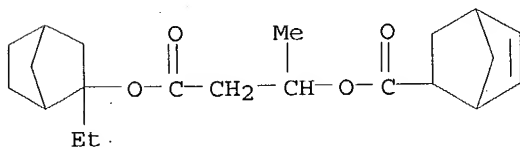
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CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(2-ethylbicyclo[2.2.1]hept-2-yl)oxy]-1-methyl-3-oxopropyl ester, polymer with 2,5-furandione and 4-hydroxy-4-methylpentyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

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CRN 370088-88-3

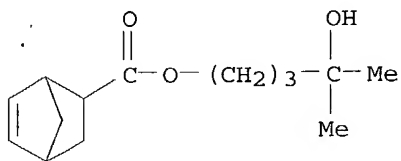
CMF C21 H30 O4



CM 2

CRN 369632-63-3

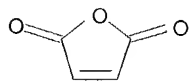
CMF C14 H22 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



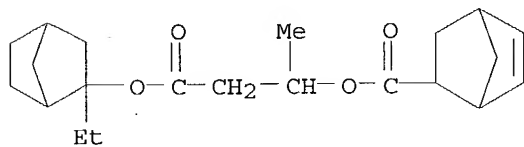
RN 370089-01-3 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(2-ethylbicyclo[2.2.1]hept-2-yl)oxy]-1-methyl-3-oxopropyl ester, polymer with 2,5-furandione and 2-(2-methoxyethoxy)ethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 370088-88-3

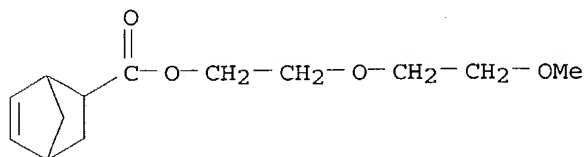
CMF C21 H30 O4



CM 2

CRN 295328-74-4

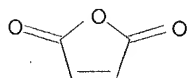
CMF C13 H20 O4



CM 3

CRN 108-31-6

CMF C4 H2 O3



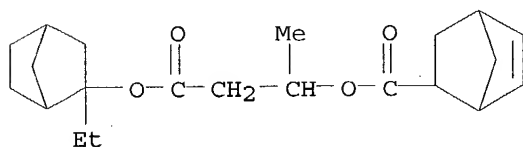
RN 370089-02-4 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(2-ethylbicyclo[2.2.1]hept-2-yl)oxy]-1-methyl-3-oxopropyl ester, polymer with 1-ethylcyclopentyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 370088-88-3

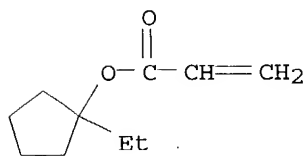
CMF C21 H30 O4



CM 2

CRN 326925-69-3

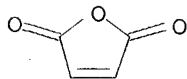
CMF C10 H16 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



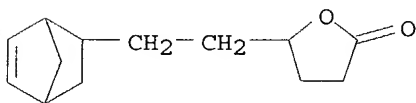
RN 370089-04-6 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(1-ethylcyclopentyl)oxy]-1-methyl-3-oxopropyl ester, polymer with 5-(2-bicyclo[2.2.1]hept-5-en-2-ylethyl)dihydro-2(3H)-furanone (9CI) (CA INDEX NAME)

CM 1

CRN 370089-03-5

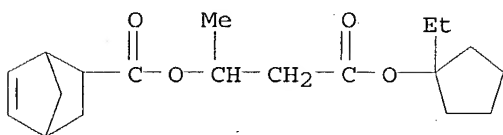
CMF C13 H18 O2



CM 2

CRN 370088-90-7

CMF C19 H28 O4



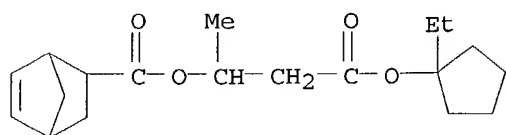
RN 370089-05-7 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[(1-ethylcyclopentyl)oxy]-1-methyl-3-oxopropyl ester, polymer with 2-(2-methoxyethoxy)ethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 370088-90-7

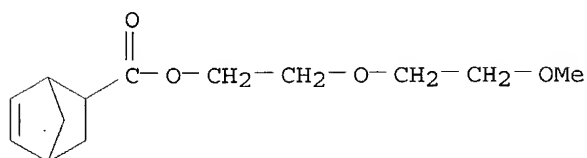
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CM 2

CRN 295328-74-4

CMF C13 H20 O4



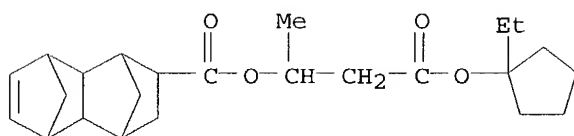
RN 370089-06-8 CAPLUS

CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, 1,2,3,4,4a,5,8,8a-octahydro-, 3-[(1-ethylcyclopentyl)oxy]-1-methyl-3-oxopropyl ester, polymer with 3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one (9CI)  
(CA INDEX NAME)

CM 1

CRN 370088-93-0

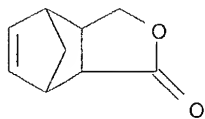
CMF C24 H34 O4



CM 2

CRN 85718-44-1

CMF C9 H10 O2



IC ICM C07C069-716  
ICS G03F007-039; C08F020-16; C07C067-14; C07C067-31

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38

ST photoresist ester resin patterning

IT Photolithography  
(UV; patterning of photoresists from ester compds. and polymers)

IT Photoresists  
(prepn. of ester compd. and polymers for photoresist compns. and patterning process)

IT 75-07-0, Acetaldehyde, reactions 27063-48-5 370088-86-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of ester compd. and polymers for photoresist compns. and patterning process)

IT 370088-87-2P 370088-88-3P 370088-89-4P 370088-90-7P 370088-91-8P  
370088-92-9P 370088-93-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of ester compd. and polymers for photoresist compns. and patterning process)

IT 370088-94-1P 370088-95-2P 370088-96-3P  
370088-97-4P 370088-98-5P 370088-99-6P  
370089-00-2P 370089-01-3P 370089-02-4P  
370089-04-6P 370089-05-7P 370089-06-8P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prepn. of ester compd. and polymers for photoresist compns. and patterning process)

L30 ANSWER 34 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:741298 CAPLUS

DOCUMENT NUMBER: 135:310919

TITLE: Alkali-developable photosensitive resin composition for photoresist method of forming pattern, and electronic parts

INVENTOR(S): Komatsu, Hiroshi; Kojima, Yasunori; Watanabe, Naoki

PATENT ASSIGNEE(S): Hitachi Chemical Du Pont Micro System Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001281859	A2	20011010	JP 2000-98906	20000331

PRIORITY APPLN. INFO.: JP 2000-98906 20000331

AB The alkali-developable photosensitive resin compn. comprises (a) a polyimide precursor having an acidic functional group in the mol. chain and being sol. in an alk. water soln., (b) a photosensitive agent, and (c) a Si compd. having a reactive unsatd. group, an akoxo group, and an acyloxy group. Method of forming a pattern from above compn. and an electronic parts having a **patterned** obtained by the **process** are also claimed.

IT 365972-05-0P 365972-06-1P 365972-07-2P  
 365972-08-3P 365972-09-4P 365972-10-7P  
 365972-11-8P 365972-12-9P 365972-13-0P  
 365972-14-1P 365972-15-2P 365972-16-3P  
 365972-17-4P 365972-18-5P 365972-19-6P  
 365972-20-9P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (alkali-developable photosensitive resin **compn.** for **photoresist** contg. polyimide precursor)

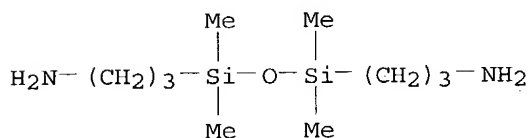
RN 365972-05-0 CAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 3,3'-dimethyl[1,1'-biphenyl]-4,4'-diamine, 2-hydroxyethyl 2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

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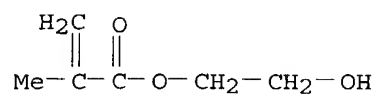


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CRN 868-77-9

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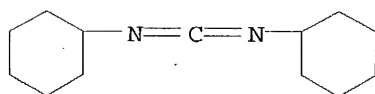




CM 3

CRN 538-75-0

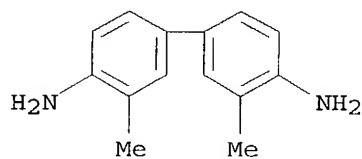
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CM 4

CRN 119-93-7

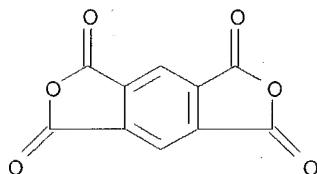
CMF C14 H16 N2



CM 5

CRN 89-32-7

CMF C10 H2 O6



RN 365972-06-1 CAPLUS

CN Benzoic acid, 3,5-diamino-, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, 3,3'-dimethyl[1,1'-biphenyl]-4,4'-diamine, 2-hydroxyethyl 2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA

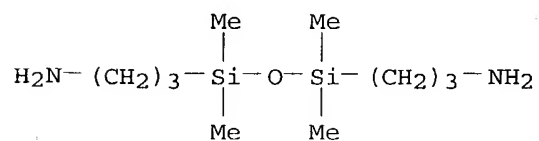
KOROMA EIC1700

INDEX NAME)

CM 1

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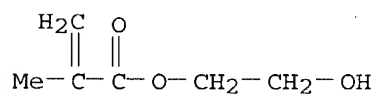
CMF C10 H28 N2 O Si2



CM 2

CRN 868-77-9

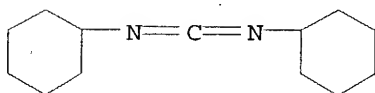
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CM 3

CRN 538-75-0

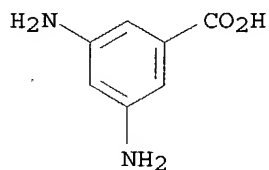
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CM 4

CRN 535-87-5

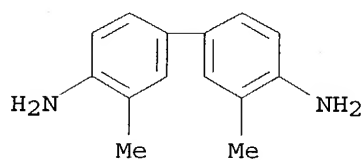
CMF C7 H8 N2 O2



CM 5

CRN 119-93-7

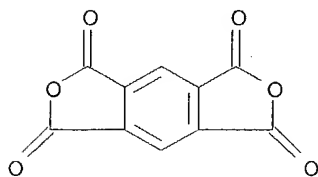
CMF C14 H16 N2



CM 6

CRN 89-32-7

CMF C10 H2 O6



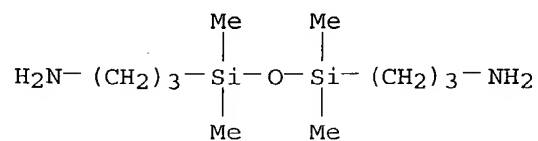
RN 365972-07-2 CAPLUS

CN Benzoic acid, 3,5-diamino-, polymer with 1,3-benzenediamine,  
1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, 2-hydroxyethyl  
2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and  
3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA  
INDEX NAME)

CM 1

CRN 2469-55-8

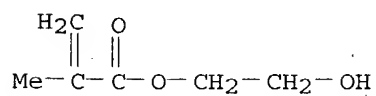
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CM 2

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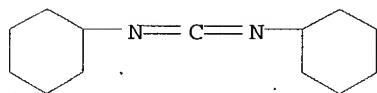
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CM 3

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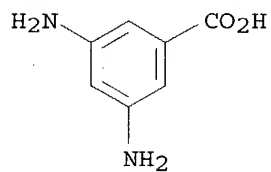
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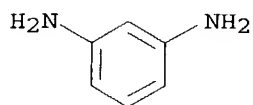
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CM 5

CRN 108-45-2

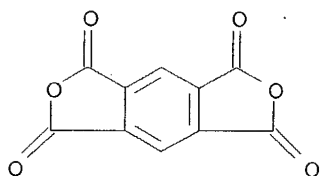
CMF C6 H8 N2



CM 6

CRN 89-32-7

CMF C10 H2 O6



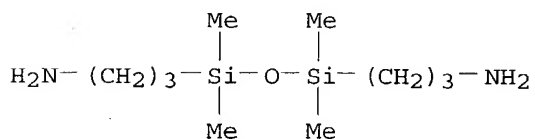
RN 365972-08-3 CAPLUS

CN Benzoic acid, 3,5-diamino-, polymer with 1,3-benzenediamine, 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 2-hydroxyethyl 2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

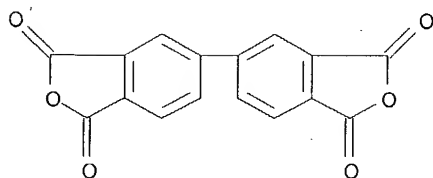
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

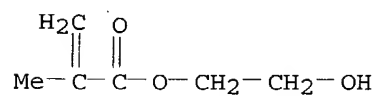
CMF C16 H6 O6



CM 3

CRN 868-77-9

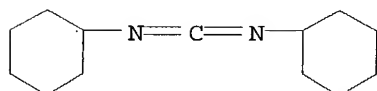
CMF C6 H10 O3



CM 4

CRN 538-75-0

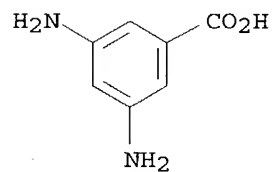
CMF C13 H22 N2



CM 5

CRN 535-87-5

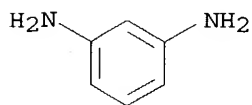
CMF C7 H8 N2 O2



CM 6

CRN 108-45-2

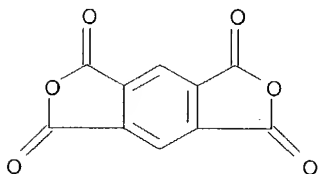
CMF C6 H8 N2



CM 7

CRN 89-32-7

CMF C10 H2 O6



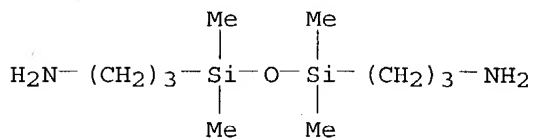
RN 365972-09-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
[5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,3'-dimethyl[1,1'-biphenyl]-  
4,4'-diamine, N,N'-methanetetraylbis[cyclohexanamine] and  
3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA  
INDEX NAME)

CM 1

CRN 2469-55-8

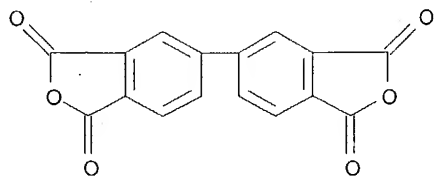
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

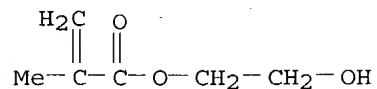
CMF C16 H6 O6



CM 3

CRN 868-77-9

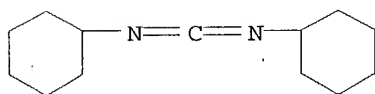
CMF C6 H10 O3



CM 4

CRN 538-75-0

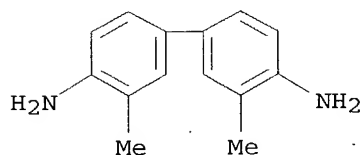
CMF C13 H22 N2



CM 5

CRN 119-93-7

CMF C14 H16 N2



RN 365972-10-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1,4-benzenediamine, [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

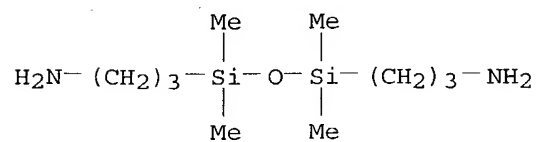
KOROMA EIC1700



CM 1

CRN 2469-55-8

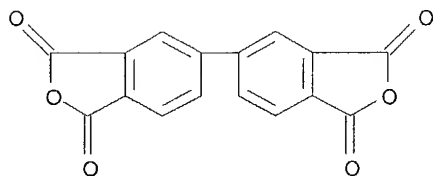
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

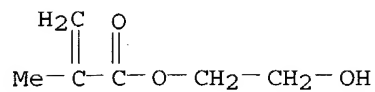
CMF C16 H6 O6



CM 3

CRN 868-77-9

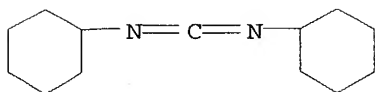
CMF C6 H10 O3



CM 4

CRN 538-75-0

CMF C13 H22 N2

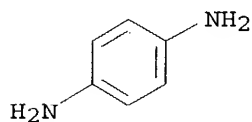


KOROMA EIC1700

CM 5

CRN 106-50-3

CMF C6 H8 N2



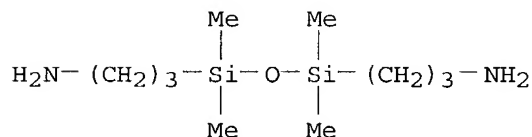
RN 365972-11-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1,3-benzenediamine, [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

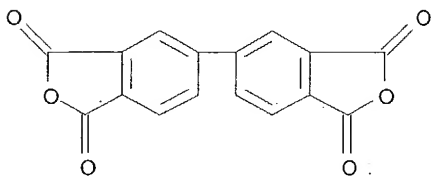
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

CMF C16 H6 O6

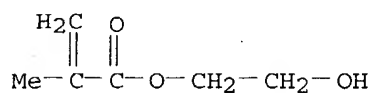


CM 3

CRN 868-77-9

KOROMA EIC1700

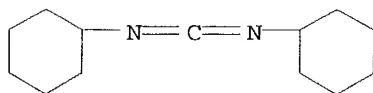
CMF C6 H10 O3



CM 4

CRN 538-75-0

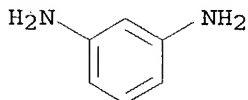
CMF C13 H22 N2



CM 5

CRN 108-45-2

CMF C6 H8 N2



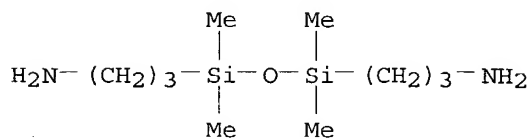
RN 365972-12-9 CAPLUS

CN Benzoic acid, 3,5-diamino-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,3'-dimethyl[1,1'-biphenyl]-4,4'-diamine, 2-hydroxyethyl 2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

CMF C10 H28 N2 O Si2

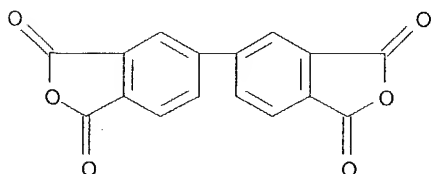


KOROMA EIC1700

CM 2

CRN 2420-87-3

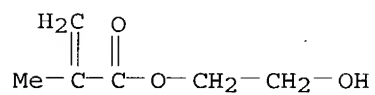
CMF C16 H6 O6



CM 3

CRN 868-77-9

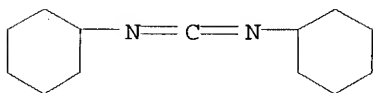
CMF C6 H10 O3



CM 4

CRN 538-75-0

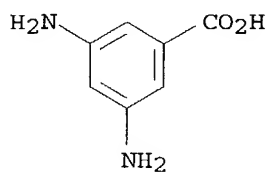
CMF C13 H22 N2



CM 5

CRN 535-87-5

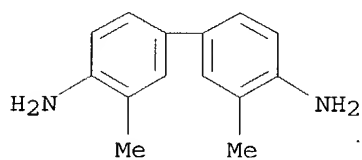
CMF C7 H8 N2 O2



CM 6

CRN 119-93-7

CMF C14 H16 N2



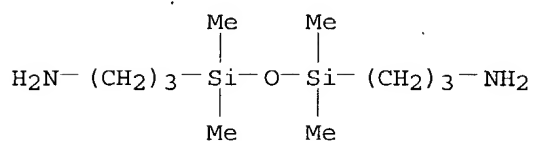
RN 365972-13-0 CAPLUS

CN Benzoic acid, 3,5-diamino-, polymer with 1,4-benzenediamine,  
[5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 2-hydroxyethyl  
2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and  
3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA  
INDEX NAME)

CM 1

CRN 2469-55-8

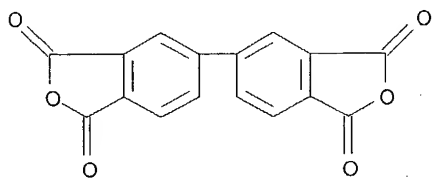
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

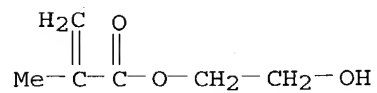
CMF C16 H6 O6



CM 3

CRN 868-77-9

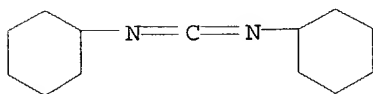
CMF C6 H10 O3



CM 4

CRN 538-75-0

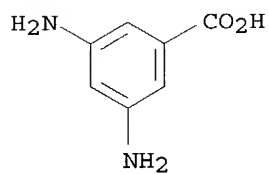
CMF C13 H22 N2



CM 5

CRN 535-87-5

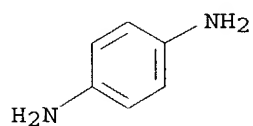
CMF C7 H8 N2 O2



CM 6

CRN 106-50-3

CMF C6 H8 N2



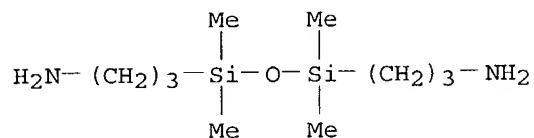
RN 365972-14-1 CAPLUS

CN Benzoic acid, 3,5-diamino-, polymer with 1,3-benzenediamine, [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 2-hydroxyethyl 2-methyl-2-propenoate, N,N'-methanetetraylbis[cyclohexanamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

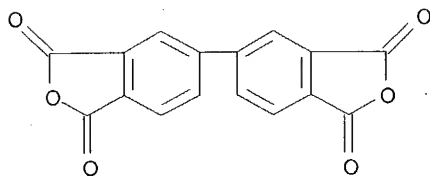
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

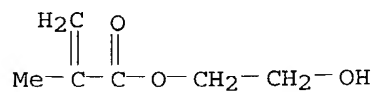
CMF C16 H6 O6



CM 3

CRN 868-77-9

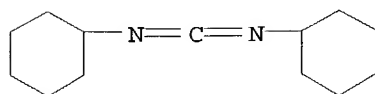
CMF C6 H10 O3



CM 4

CRN 538-75-0

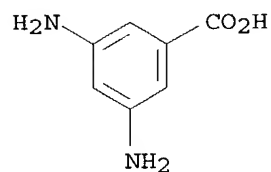
CMF C13 H22 N2



CM 5

CRN 535-87-5

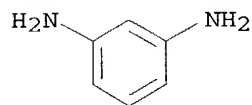
CMF C7 H8 N2 O2



CM 6

CRN 108-45-2

CMF C6 H8 N2



RN 365972-15-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
3,3'-dimethyl[1,1'-biphenyl]-4,4'-diamine, N,N'-  
methanetetraylbis[cyclohexanamine], 5,5'-oxybis[1,3-isobenzofurandione]  
and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI)  
(CA INDEX NAME)

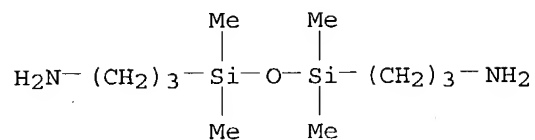
KOROMA EIC1700



CM 1

CRN 2469-55-8

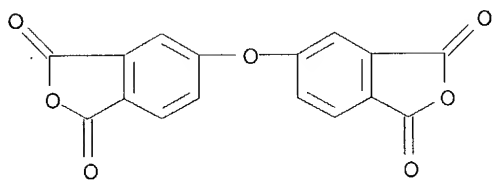
CMF C10 H28 N2 O Si2



CM 2

CRN 1823-59-2

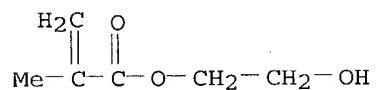
CMF C16 H6 O7



CM 3

CRN 868-77-9

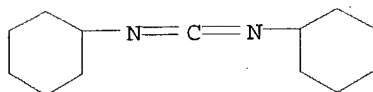
CMF C6 H10 O3



CM 4

CRN 538-75-0

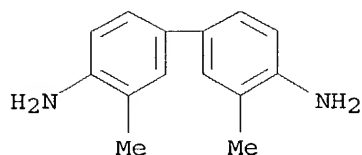
CMF C13 H22 N2



CM 5

CRN 119-93-7

CMF C14 H16 N2



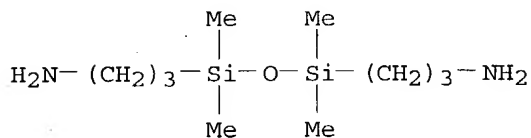
RN 365972-16-3 CAPIUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with N,N'-methanetetraylbis[cyclohexanamine], 4,4'-oxybis[benzenamine], 5,5'-oxybis[1,3-isobenzofurandione] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

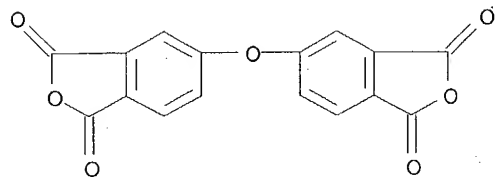
CMF C10 H28 N2 O Si2



CM 2

CRN 1823-59-2

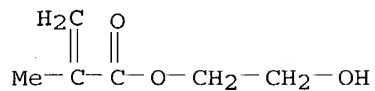
CMF C16 H6 O7



CM 3

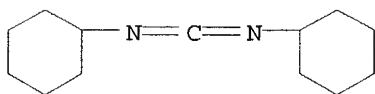
KOROMA EIC1700

CRN 868-77-9  
CMF C6 H10 O3



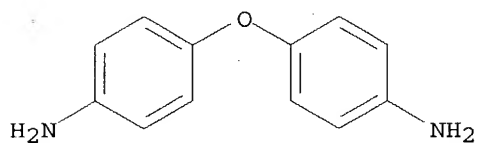
CM 4

CRN 538-75-0  
CMF C13 H22 N2



CM 5

CRN 101-80-4  
CMF C12 H12 N2 O

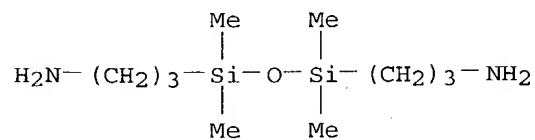


RN 365972-17-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
N,N'-methanetetraylbis[cyclohexanamine], 5,5'-oxybis[1,3-  
isobenzofurandione], 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-  
propanamine] and 4,4'-thiobis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

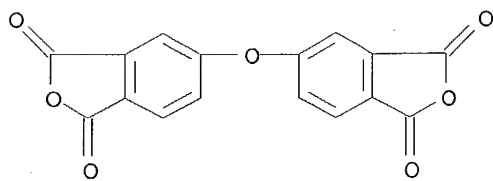
CRN 2469-55-8  
CMF C10 H28 N2 O Si2



CM 2

CRN 1823-59-2

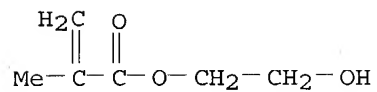
CMF C16 H6 O7



CM 3

CRN 868-77-9

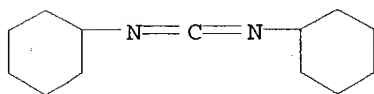
CMF C6 H10 O3



CM 4

CRN 538-75-0

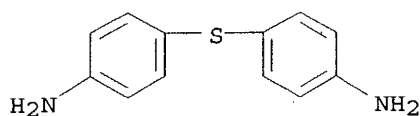
CMF C13 H22 N2



CM 5

CRN 139-65-1

CMF C12 H12 N2 S



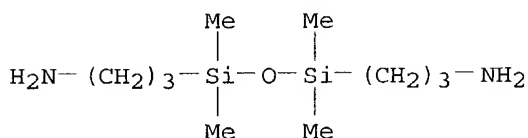
RN 365972-18-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, N,N'-methanetetraylbis[cyclohexanamine], 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

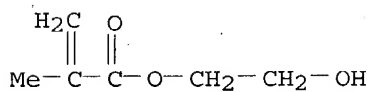
CMF C10 H28 N2 O Si2



CM 2

CRN 868-77-9

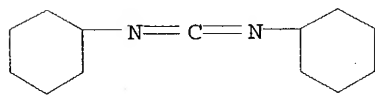
CMF C6 H10 O3



CM 3

CRN 538-75-0

CMF C13 H22 N2

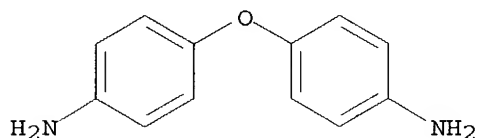


KOROMA EIC1700

CM 4

CRN 101-80-4

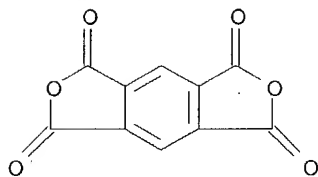
CMF C12 H12 N2 O



CM 5

CRN 89-32-7

CMF C10 H2 O6



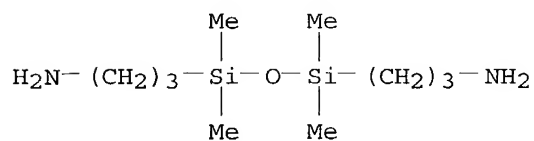
RN 365972-19-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, N,N'-methanetetraylbis[cyclohexanamine], 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] and 4,4'-thiobis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

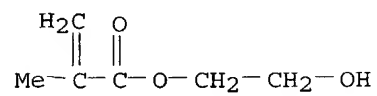
CMF C10 H28 N2 O Si2



CM 2

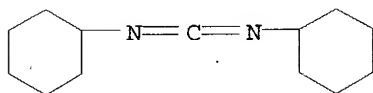
KOROMA EIC1700

CRN 868-77-9  
CMF C6 H10 O3



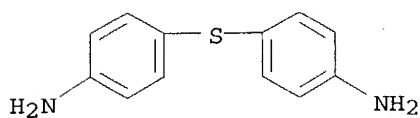
CM 3

CRN 538-75-0  
CMF C13 H22 N2



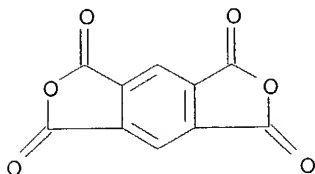
CM 4

CRN 139-65-1  
CMF C12 H12 N2 S



CM 5

CRN 89-32-7  
CMF C10 H2 O6



RN 365972-20-9 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
[5,5'-biisobenzofuran]-1,1',3,3'-tetrone, N,N'-

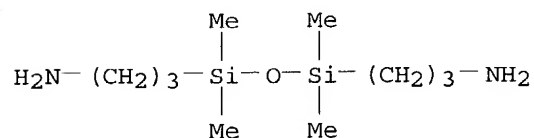
KOROMA EIC1700

methanetetraylbis[cyclohexanamine], 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] and 4,4'-thiobis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

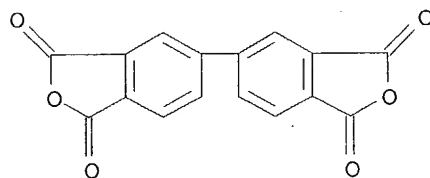
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

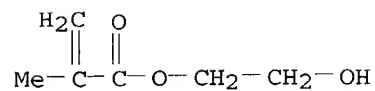
CMF C16 H6 O6



CM 3

CRN 868-77-9

CMF C6 H10 O3

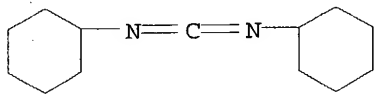


CM 4

CRN 538-75-0

CMF C13 H22 N2

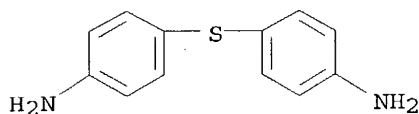




CM 5

CRN 139-65-1

CMF C12 H12 N2 S



IC ICM G03F007-037  
ICS C08F002-50; C08F283-04; C08F290-00; C08G073-10; G03F007-027;  
G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 38, 76

ST photoresist photosensitive resin compn patterning electronic parts;  
polyimide precursor photoresist

IT Photoresists  
(alkali-developable photosensitive resin compn. for photoresist contg.  
polyimide precursor)

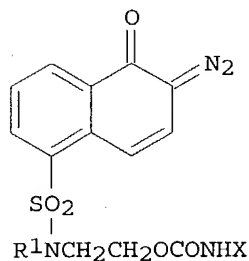
IT Polyimides, processes  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic  
preparation); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); USES (Uses)  
(alkali-developable photosensitive resin compn. for photoresist contg.  
polyimide precursor)

IT Polyamic acids  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(alkali-developable photosensitive resin compn. for photoresist contg.  
polyimide precursor)

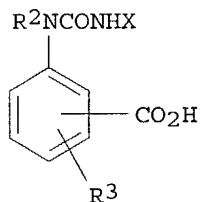
IT 365972-05-0P 365972-06-1P 365972-07-2P  
365972-08-3P 365972-09-4P 365972-10-7P  
365972-11-8P 365972-12-9P 365972-13-0P  
365972-14-1P 365972-15-2P 365972-16-3P  
365972-17-4P 365972-18-5P 365972-19-6P  
365972-20-9P  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic  
preparation); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); USES (Uses)  
(alkali-developable photosensitive resin compn. for  
photoresist contg. polyimide precursor)

L30 ANSWER 35 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2001:738599 CAPLUS  
 DOCUMENT NUMBER: 135:310911  
 TITLE: Positive-working photosensitive coating composition,  
 manufacture thereof, and patterning method  
 INVENTOR(S): Yamanaka, Kazuo; Onishi, Shinsuke; Miyazaki, Masaru;  
 Miyagawa, Kenji; Seko, Kenji  
 PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001281854	A2	20011010	JP 2000-93493	20000330
PRIORITY APPLN. INFO.:			JP 2000-93493	20000330
OTHER SOURCE(S):			MARPAT 135:310911	
GI				



I



II

AB The pos.-working photosensitive coating compn. comprises: (1) a resin contg. a photosensitive modified quinonedizidesulfoneamide I (R<sub>1</sub> = H, alkyl, arom., alicyclyl; and X = acrylic resin residue chain) 0.1-0.9 mol per 1 kg of the resin; (2) a pos.-working photosensitive resin contg. II (R<sub>2,3</sub> = R10.2-4.0 mol per 1kg of the resin; and (3) a photosensitive substance as an additive 0.1-0.9 mol per 1 kg of the resin. The manufg. process and the patterning method using electrodeposition are also claimed. of pat.

IT 88177-19-9P, 2-Hydroxyethyl acrylate-isophoronediiisocyanate copolymer 365546-57-2P 365546-58-3P 365546-59-4P 365546-60-7P

RL: PEP (Physical engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (pos.-working photosensitive coating compn. for

**photoresist)**

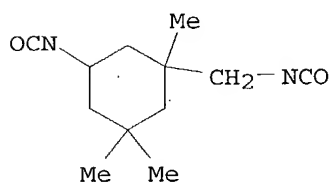
RN 88177-19-9 CAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

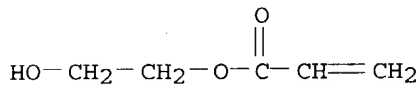
CMF C12 H18 N2 O2



CM 2

CRN 818-61-1

CMF C5 H8 O3



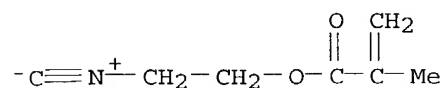
RN 365546-57-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenylbenzene, 2-isocyanoethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 77525-26-9

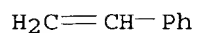
CMF C7 H9 N O2



CM 2

CRN 100-42-5

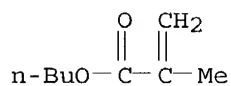
CMF C8 H8



CM 3

CRN 97-88-1

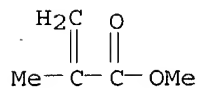
CMF C8 H14 O2



CM 4

CRN 80-62-6

CMF C5 H8 O2



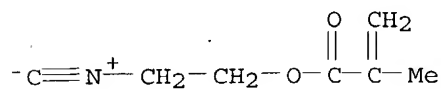
RN 365546-58-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with ethenylbenzene, 2-ethylhexyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-isocyanoethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-methylpropyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 77525-26-9

CMF C7 H9 N O2

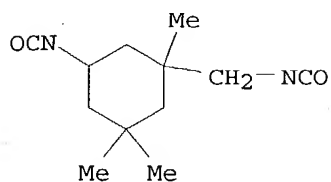


CM 2

CRN 4098-71-9

KOROMA EIC1700

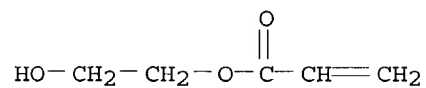
CMF C12 H18 N2 O2



CM 3

CRN 818-61-1

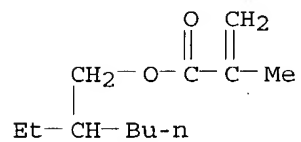
CMF C5 H8 O3



CM 4

CRN 688-84-6

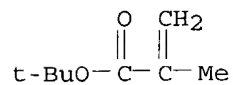
CMF C12 H22 O2



CM 5

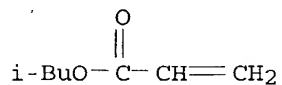
CRN 585-07-9

CMF C8 H14 O2



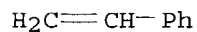
CM 6

CRN 106-63-8  
CMF C7 H12 O2



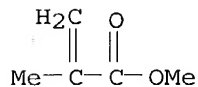
CM 7

CRN 100-42-5  
CMF C8 H8



CM 8

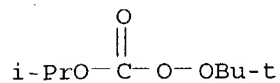
CRN 80-62-6  
CMF C5 H8 O2



RN 365546-59-4 CAPLUS  
CN 2-Propenoic acid, butyl ester, polymer with OO-(1,1-dimethylethyl)  
O-(1-methylethyl) carbonoperoxoate, ethenylbenzene and  
1-(1-isocyanato-1-methylethyl)-3-(1-methylethenyl)benzene (9CI) (CA INDEX  
NAME)

CM 1

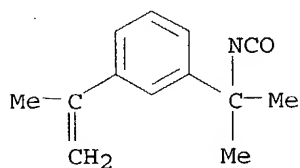
CRN 2372-21-6  
CMF C8 H16 O4



CM 2

CRN 2094-99-7

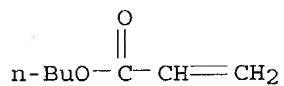
CMF C13 H15 N O



CM 3

CRN 141-32-2

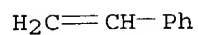
CMF C7 H12 O2



CM 4

CRN 100-42-5

CMF C8 H8



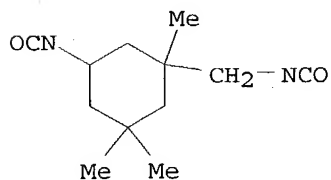
RN 365546-60-7 CAPLUS

CN Benzoic acid, 4-amino-, polymer with 2-hydroxyethyl 2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

CMF C12 H18 N2 O2

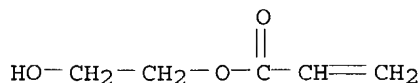


KOROMA EIC1700

CM 2

CRN 818-61-1

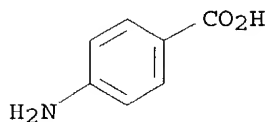
CMF C5 H8 O3



CM 3

CRN 150-13-0

CMF C7 H7 N O2



IC ICM G03F007-023

ICS C08F008-30; C08F008-34; H05K003-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 76

ST photosensitive resin compn photoresist; patterning photoresist printed circuit board

IT Electrodeposition

Printed circuit boards

(patterning of pos.-working photosensitive coating compn.)

IT Photoresists

(pos.-working photosensitive coating compn. for photoresist)

IT Polyurethanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(pos.-working photosensitive coating compn. for photoresist)

IT 25136-77-0P, 4-Aminobenzoic acid homopolymer **88177-19-9P**,

2-Hydroxyethyl acrylate-isophoronediiisocyanate copolymer

**365546-57-2P 365546-58-3P 365546-59-4P**

**365546-60-7P**

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP

(Preparation); PROC (Process); USES (Uses)

(pos.-working photosensitive coating compn. for photoresist)

IT 872-50-4, N-Methylpyrrolidone, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(pos.-working photosensitive coating compn. for photoresist)

KOROMA EIC1700



L30 ANSWER 36 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:676345 CAPLUS

DOCUMENT NUMBER: 135:249450

TITLE: Polymer, resist composition and **patterning process**

INVENTOR(S): Nishi, Tsunehiro; Hasegawa, Koji; Watanabe, Takeru; Kinsho, Takeshi; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 36 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

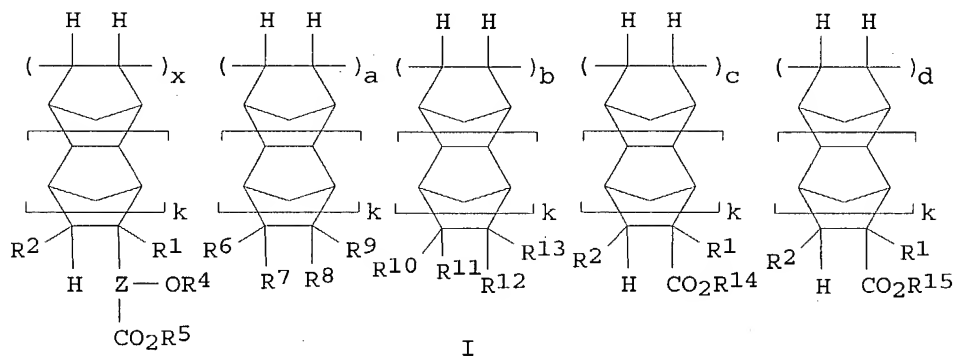
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1132774	A2	20010912	EP 2001-301953	20010305
EP 1132774	A3	20010919		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001323027	A2	20011120	JP 2001-56669	20010301
US 2001026904	A1	20011004	US 2001-797878	20010305
US 6566037	B2	20030520		

PRIORITY APPLN. INFO.:

JP 2000-60626 A 20000306

GI



AB The invention relates to (a) a polymer comprising specific units with a firm alicyclic structure having both polar and acid-labile groups, (b) a resist compn. comprising the polymer as a base resin, having improved reactivity, substrate adhesion and etching resistance and esp. suited as micropatterning material for VLSI fabrication, and (c) a **patterning process** using the same. A polymer comprising recurring units of formula (I) and having a mol. wt. of 1,000-500,000 is provided. In I, R1 is H, Me or CH<sub>2</sub>CO<sub>2</sub>R<sub>3</sub>, R2 is H, Me or CO<sub>2</sub>R<sub>3</sub>, R3 is

alkyl, R4 is H, alkyl, alkoxyalkyl or acyl, R5 and R15 are acid labile groups, and .gtoreq.1 of R6 to R9 is a carboxyl or hydroxyl-contg. monovalent hydrocarbon group, and the reminders are H or alkyl, .gtoreq.1 of R10 to R13 is a monovalent hydrocarbon group contg. a -CO2- partial structure, and the reminders are H or alkyl, R14 is a polycyclic hydrocarbon group or polycyclic hydrocarbon-contg. alkyl group, Z is a trivalent hydrocarbon group, k = 0 or 1, x is > 0, a, b, c and d are .gtoreq. 0, satisfying  $x+a+b+c+d = 1$ . A resist compn. comprising the polymer has significantly improved sensitivity, resoln. and etching resistance and is very useful in microfabrication.

IT 359635-35-1P 359635-38-4P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. and use of polymer having better reactivity and substrate adhesion and etch-resistance as base resin in **resist compn.** and patterning)

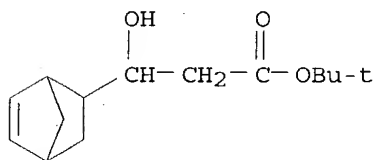
RN 359635-35-1 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-propanoic acid, .beta.-hydroxy-, 1,1-dimethylethyl ester, polymer with 4',5'-dihydrospiro[bicyclo[2.2.1]hept-5-ene-2,3'(2'H)-furan]-2'-one (9CI) (CA INDEX NAME)

CM 1

CRN 195245-82-0

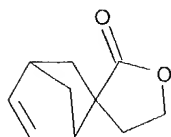
CMF C14 H22 O3



CM 2

CRN 72377-80-1

CMF C10 H12 O2



RN 359635-38-4 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-butanoic acid, .beta.-hydroxy-, 1,1-dimethylethyl ester, polymer with 4',5'-dihydrospiro[bicyclo[2.2.1]hept-5-ene-2,3'(2'H)-furan]-2'-one (9CI) (CA INDEX NAME)

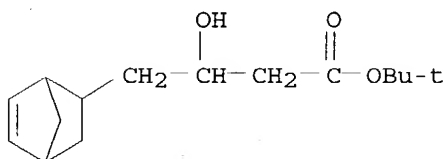
KOROMA EIC1700

t-5-ene-2,3' (2'H)-furan]-2'-one (9CI) (CA INDEX NAME)

CM 1

CRN 359635-31-7

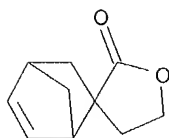
CMF C15 H24 O3



CM 2

CRN 72377-80-1

CMF C10 H12 O2



IC ICM G03F007-039  
ICS G03F007-004; C08F232-08

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST polymer resist patterning microfabrication acid labile

IT Photomasks (lithographic masks)  
Photoresists  
(resist compn. contg. polymer having better reactivity and substrate adhesion and etch-resistance as base resin)

IT Polymers, preparation  
RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(resist compn. contg. polymer having better reactivity and substrate adhesion and etch-resistance as base resin)

IT 122752-67-4 308141-03-9 336617-58-4 359635-45-3  
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(dissoln. regulator; resist compn. contg. polymer having better reactivity and substrate adhesion and etch-resistance as base resin and)

IT 66003-78-9, Triphenylsulfonium triflate 144317-44-2, Triphenylsulfonium perfluorobutanesulfonate

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(photoacid generator; resist compn. contg. polymer having better reactivity and substrate adhesion and etch-resistance as base resin and)

IT 359635-35-1P 359635-36-2P 359635-37-3P 359635-38-4P  
359635-39-5P 359635-40-8P 359635-41-9P 359635-42-0P 359635-43-1P  
359635-44-2P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. and use of polymer having better reactivity and substrate adhesion and etch-resistance as base resin in resist compn. and patterning)

IT 102-71-6, Triethanolamine, reactions 102-82-9, Tributylamine 108-94-1, Cyclohexanone, reactions 84540-57-8, Propylene glycol methyl ether acetate 211919-60-7 218770-96-8

RL: MOA (Modifier or additive use); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(resist compn. contg. polymer having better reactivity and substrate adhesion and etch-resistance as base resin and)

IT 81-25-4 828-51-3, Adamantane-1-carboxylic acid

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(resist compn. contg. polymer having better reactivity and substrate adhesion and etch-resistance as base resin and)

IT 37503-42-7P 72377-80-1P 154970-45-3P 195245-82-0P 359635-29-3P  
359635-30-6P 359635-31-7P 359635-32-8P 359635-33-9P 359635-34-0P

RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(synthesis of monomer for prepn. and use of polymer having better reactivity and substrate adhesion and etch-resistance as base resin in resist compn. and patterning)

L30 ANSWER 37 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:643383 CAPLUS

DOCUMENT NUMBER: 135:203015

TITLE: Novel polymers, chemical amplification resist compositions and **patterning process**

INVENTOR(S): Hatakeyama, Jun; Watanabe, Jun; Harada, Yuji

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 23 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 2001018162	A1	20010830	US 2001-783321	20010215

JP 2001302728 A2 20011031 JP 2001-30542 20010207

PRIORITY APPLN. INFO.: JP 2000-37396 A 20000216

AB The polymers comprises recurring units of an acrylic deriv. of fluorinated backbone [CR1R2CR3(C(:O)OR4)] (R1-3 = H, F, C1-20 alkyl or fluorinated C1-20 alkyl, at least one of R1-3 contains fluorine; and R4 = hydrophilic group). Using the polymers, chem. amplification pos. resist compns. featuring low absorption of F2 excimer laser light are obtained.

IT 357294-13-4P 357294-15-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(chem. amplification resist compns. contg.)

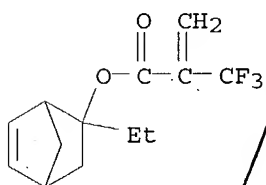
RN 357294-13-4 CAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-ethylbicyclo[2.2.1]hept-5-en-2-yl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 357294-12-3

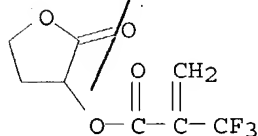
CMF C13 H15 F3 O2



CM 2

CRN 357294-11-2

CMF C8 H7 F3 O4



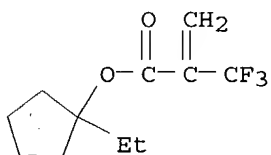
RN 357294-15-6 CAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, ethyl ester, polymer with 1-ethylcyclopentyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 357294-14-5

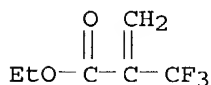
CMF C11 H15 F3 O2



CM 2

CRN 87769-68-4

CMF C6 H7 F3 O2



IC ICM G03C001-00

ICS G03F007-00; G03C001-73; C08G061-00; G03F007-40

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST photoresist fluorinated acrylic compn patterning

IT Positive photoresists

(fluorinated acrylic deriv. chem. amplification resist compns. and patterning process)

IT 357294-03-2P 357294-05-4P 357294-07-6P 357294-09-8P 357294-10-1P  
357294-13-4P 357294-15-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chem. amplification resist compns. contg.)

L30 ANSWER 38 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:615617 CAPLUS

DOCUMENT NUMBER: 135:187715

TITLE: Fluorine-containing polymers, resist compositions and patterning process

INVENTOR(S): Harada, Yuji; Watanabe, Jun; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO. DATE

KOROMA EIC1700

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 EP 1126322      A2    20010822      EP 2001-301347    20010216  
 EP 1126322      A3    20010829

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO

JP 2001302726      A2    20011031      JP 2001-30530      20010207  
 US 2001033989      A1    20011025      US 2001-783467    20010215

PRIORITY APPLN. INFO.:      JP 2000-38309    A    20000216

AB Polymers having fluorinated ester groups are novel. Using the polymers, resist compns. featuring low absorption of F2 excimer laser light are obtained. The polymers contain groups of the following general formula represented by -OCR<sub>1</sub>R<sub>2</sub>CHR<sub>3</sub>R<sub>4</sub> (R<sub>1</sub>-4 = H, F, C<sub>1</sub>-20 alkyl). A **process** for forming a **pattern** using above polymers is also claimed.

IT 354818-15-8P 354818-16-9P 354818-17-0P  
 354818-18-1P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(Fluorine-contg. polymers; **resist compns.** and **patterning process**)

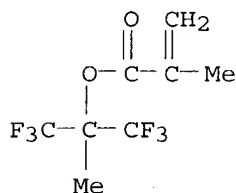
RN 354818-15-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,2-trifluoro-1-methyl-1-(trifluoromethyl)ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 354818-13-6

CMF C8 H8 F6 O2



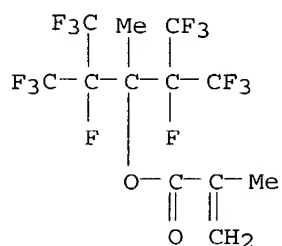
RN 354818-16-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,3,3,3-tetrafluoro-1-methyl-1-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-2-(trifluoromethyl)propyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 354818-14-7

CMF C12 H8 F14 O2



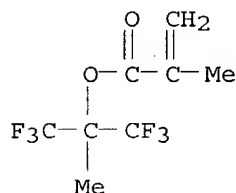
RN 354818-17-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 2,2,2-trifluoro-1-methyl-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 354818-13-6

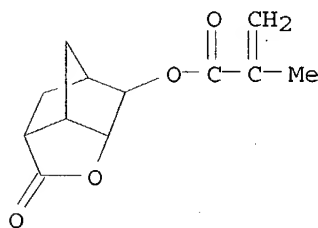
CMF C8 H8 F6 O2



CM 2

CRN 254900-07-7

CMF C12 H14 O4



RN 354818-18-1 CAPLUS

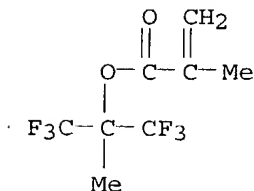
CN 2-Propenoic acid, 2-methyl-, tetrahydro-2-oxo-3-furanyl ester, polymer with 2,2,2-trifluoro-1-methyl-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

KOROMA EIC1700

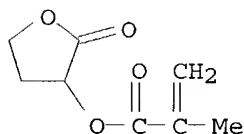


CRN 354818-13-6  
CMF C8 H8 F6 O2



CM 2

CRN 195000-66-9  
CMF C8 H10 O4



- IC ICM G03F007-039  
ICS C08F020-22; C08F020-24; C08F032-00; C08F032-08; C08F022-40;  
C08F022-18; G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 38, 76
- ST photoresist compn fluorinated ester patterning
- IT Positive photoresists  
(Fluorine-contg. polymers, resist compns. and **patterning process**)
- IT 684-16-2, Hexafluoroacetone 813-44-5 920-46-7, Methacrylic chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Fluorine-contg. polymers, resist compns. and **patterning process**)
- IT 354818-13-6P 354818-14-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(Fluorine-contg. polymers, resist compns. and **patterning process**)
- IT 354818-15-8P 354818-16-9P 354818-17-0P  
354818-18-1P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(Fluorine-contg. polymers, resist compns. and **patterning process**)

IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine 211919-60-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (basic compd.; Fluorine-contg. polymers, resist compns. and  
**patterning process**)

IT 139254-88-9  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (dissoln. inhibitor; Fluorine-contg. polymers, resist compns. and  
**patterning process**)

IT 66003-76-7 66003-78-9  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoacid; Fluorine-contg. polymers, resist compns. and  
**patterning process**)

L30 ANSWER 39 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:595543 CAPLUS

DOCUMENT NUMBER: 135:172993

TITLE: Resist exposure method using polymer having extended  
 .pi. electron system

INVENTOR(S): Matsuzawa, Nobuyuki; Yano, Akira

PATENT ASSIGNEE(S): Sony Corp., Japan; Fujitsu Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2001222109	A2	20010817	JP 2000-35665	20000208
PRIORITY APPLN. INFO.:			JP 2000-35665	20000208

AB In the patterning method by exposure using x-ray, vacuum UV, extreme UV, and soft x-ray, a polymer having extended .pi. electron system of an arom. ring [CR1R2CR3(AR4o(OR5)m)]n and/or [CR1R2AR3o(OR4)m]n [A = arom. or heterocycle other than benzene ring; n, m, o = integer; R1-5 = H, (substituted) alkyl, (substituted) Ph, halo, (substituted) ether, (substituted) ester] is used as a polymer of a resist layer. The resist layer shows good light transmittance and useful for lithog. **process giving super fine patterns.**

IT 354589-54-1

RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoresists compn. contg. polymer having extended  
 .pi. electron system)

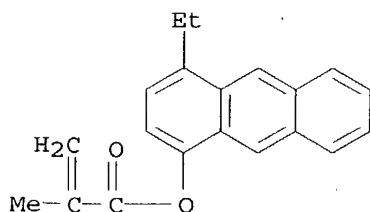
RN 354589-54-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 4-ethyl-1-anthracenyl ester, homopolymer  
 (9CI) (CA INDEX NAME)

CM 1

CRN 354589-53-0

CMF C20 H18 O2



IC ICM G03F007-039  
ICS C08F112-32; C08G008-04; G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

ST photoresist polymer extended pi electron system; photolithog  
polyhydroxystyrene phenolic resin pi electron system

IT Photoresists  
(photoresists compn. contg. polymer having extended .pi. electron system)

IT Phenolic resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresists compn. contg. polymer having extended .pi. electron system)

IT Photolithography  
(photoresists compn. contg. polymer having extended .pi. electron system for photolithog.)

IT 354589-34-7DP, sapond. 354589-36-9DP, sapond. 354589-48-3P  
354589-50-7P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photoresists compn. contg. polymer having extended .pi. electron system)

IT 354589-38-1 354589-40-5 354589-42-7 354589-43-8 354589-45-0  
354589-47-2 354589-49-4 354589-52-9 **354589-54-1**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**photoresists compn.** contg. polymer having extended .pi. electron system)

L30 ANSWER 40 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:396557 CAPLUS

DOCUMENT NUMBER: 134:374061

TITLE: Positive resist composition with high transparency to UV laser comprising acrylic resin with fluorine-containing group and **patterning process**

INVENTOR(S): Tsutsumi, Kentaro; Ootani, Michitaka; Maeda, Kazuhiko

PATENT ASSIGNEE(S): Central Glass Company, Limited, Japan

SOURCE: Eur. Pat. Appl., 13 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1103856	A1	20010530	EP 2000-125919	20001127
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001154362	A2	20010608	JP 1999-338701	19991129

PRIORITY APPLN. INFO.:

JP 1999-338701 A 19991129

AB Disclosed is a pos. resist compn. comprising (a) an acrylic resin which is subject to a change in soly. in a basic aq. soln., the acrylic resin comprising an acrylic or methacrylic acid ester unit comprising an ester moiety with a fluorine-contg. group; and (b) a photoacid generator capable of releasing an acid when irradiated with a laser. The compn. is high in transparency to vacuum UV laser beams, particularly the F2 excimer laser beam, and high in sensitivity.

IT 340299-66-3P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(pos. resist compn. with high transparency to UV

laser comprising acrylic resin with fluorine-contg. group)

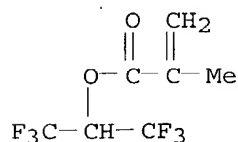
RN 340299-66-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with cyclohexyl 2-methyl-2-propenoate, 1,1-dimethylethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3063-94-3

CMF C7 H6 F6 O2

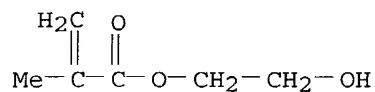


CM 2

CRN 868-77-9

CMF C6 H10 O3

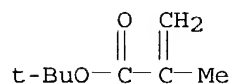
KOROMA EIC1700



CM 3

CRN 585-07-9

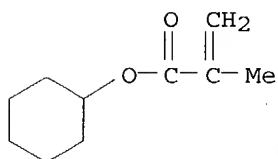
CMF C8 H14 O2



CM 4

CRN 101-43-9

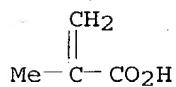
CMF C10 H16 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



IT 28825-23-2P, Poly(1,1,1,3,3,3-hexafluoroisopropyl methacrylate)  
340299-64-1P 340299-68-5P 340299-70-9P  
340299-72-1P 340299-74-3P 340299-76-5P  
340299-79-8P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(pos. resist compn. with high transparency to UV  
laser comprising acrylic resin with fluorine-contg. group)

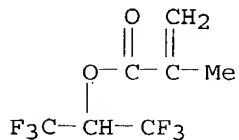
KOROMA EIC1700

RN 28825-23-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl  
 ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3063-94-3

CMF C7 H6 F6 O2

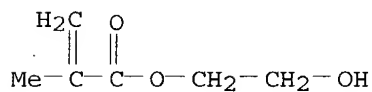


RN 340299-64-1 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with  
 2-hydroxyethyl 2-methyl-2-propenoate and 2,2,2-trifluoroethyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

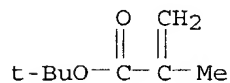
CMF C6 H10 O3



CM 2

CRN 585-07-9

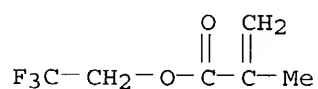
CMF C8 H14 O2



CM 3

CRN 352-87-4

CMF C6 H7 F3 O2



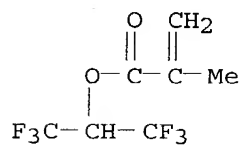
RN 340299-68-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl  
2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl  
2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3063-94-3

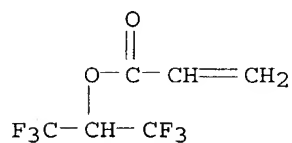
CMF C7 H6 F6 O2



CM 2

CRN 2160-89-6

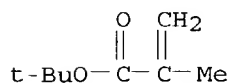
CMF C6 H4 F6 O2



CM 3

CRN 585-07-9

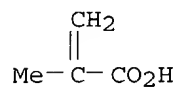
CMF C8 H14 O2



CM 4

KOROMA EIC1700

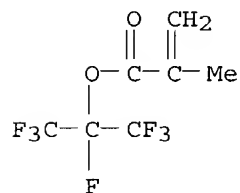
CRN 79-41-4  
CMF C4 H6 O2



RN 340299-70-9 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and  
1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

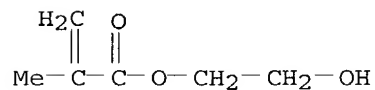
CM 1

CRN 7459-59-8  
CMF C7 H5 F7 O2



CM 2

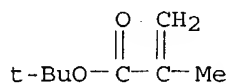
CRN 868-77-9  
CMF C6 H10 O3



CM 3

CRN 585-07-9  
CMF C8 H14 O2

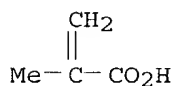




CM 4

CRN 79-41-4

CMF C4 H6 O2



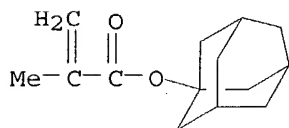
RN 340299-72-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-  
heptafluorodecyl 2-methyl-2-propenoate, 2-hydroxyethyl  
2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 16887-36-8

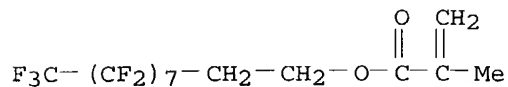
CMF C14 H20 O2



CM 2

CRN 1996-88-9

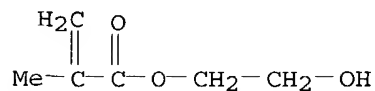
CMF C14 H9 F17 O2



CM 3

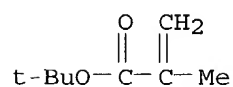
KOROMA EIC1700

CRN 868-77-9  
CMF C6 H10 O3



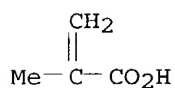
CM 4

CRN 585-07-9  
CMF C8 H14 O2



CM 5

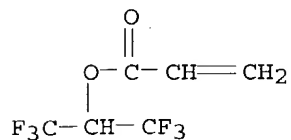
CRN 79-41-4  
CMF C4 H6 O2



RN 340299-74-3 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with  
2-propenoic acid, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-propenoate  
and 3,3,3-trifluoro-2-(trifluoromethyl)-1-propene (9CI) (CA INDEX NAME)

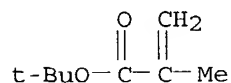
CM 1

CRN 2160-89-6  
CMF C6 H4 F6 O2



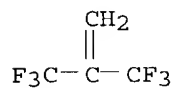
CM 2

CRN 585-07-9  
CMF C8 H14 O2



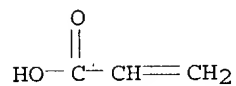
CM 3

CRN 382-10-5  
CMF C4 H2 F6



CM 4

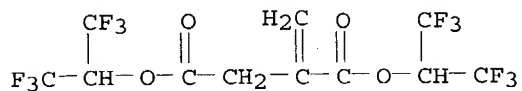
CRN 79-10-7  
CMF C3 H4 O2



RN 340299-76-5 CAPLUS  
CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with cyclohexyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

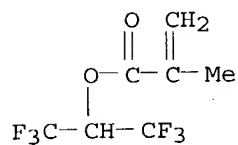
CRN 98452-82-5  
CMF C11 H6 F12 O4



CM 2

CRN 3063-94-3

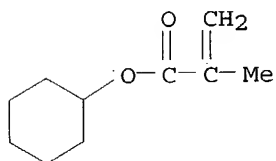
CMF C7 H6 F6 O2



CM 3

CRN 101-43-9

CMF C10 H16 O2



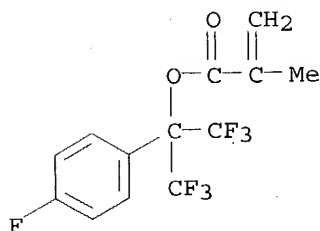
RN 340299-79-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2,2,2-trifluoro-1-(4-fluorophenyl)-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

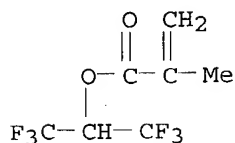
CRN 151868-14-3

CMF C13 H9 F7 O2



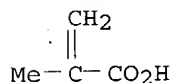
CM 2

CRN 3063-94-3  
CMF C7 H6 F6 O2



CM 3

CRN 79-41-4  
CMF C4 H6 O2



- IC ICM G03F007-039  
ICS G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST pos photoresist UV compn acrylic resin fluorine contg prepn; photolithog  
UV resist compn acrylic resin fluorine contg prepn
- IT Photolithography  
Positive photoresists  
(UV; pos. resist compn. with high transparency to UV laser comprising acrylic resin with fluorine-contg. group and **patterning process**)
- IT Fluoropolymers, properties  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(pos. resist compn. with high transparency to UV laser comprising acrylic resin with fluorine-contg. group and **patterning process**)
- IT 927-07-1, tert-Butyl peroxyphthalate  
RL: CAT (Catalyst use); USES (Uses)  
(initiator; in prepn. of acrylic resin with fluorine-contg. group for pos. resist compn. with high transparency to UV laser)
- IT 340299-66-3P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(pos. resist compn. with high transparency to UV

laser comprising acrylic resin with fluorine-contg. group)  
 IT 28825-23-2P, Poly(1,1,1,3,3,3-hexafluoroisopropyl methacrylate)  
 340299-64-1P 340299-68-5P 340299-70-9P  
 340299-72-1P 340299-74-3P 340299-76-5P  
 340299-79-8P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. resist compn. with high transparency to UV)

laser comprising acrylic resin with fluorine-contg. group)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 41 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:356328 CAPLUS

DOCUMENT NUMBER: 134:346477

TITLE: Chemically amplified positive resist composition and patterning method

INVENTOR(S): Takemura, Katsuya; Koizumi, Kenji; Kaneko, Tatsushi; Sakurada, Toyohisa

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 53 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1099983	A1	20010516	EP 2000-310001	20001110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001142199	A2	20010525	JP 1999-323332	19991112
US 6511785	B1	20030128	US 2000-709629	20001113

PRIORITY APPLN. INFO.: JP 1999-323332 A 19991112

AB The invention relates to a chem.-amplified pos. resist compn. for forming a contact hole **pattern** by the thermal flow **process**. A method for forming a contact hole pattern using a chem.-amplified pos. resist compn. comprising a polymer as the base resin involves the thermal flow step of heat treating the contact hole pattern for further reducing the size of contact holes. A chem.-amplified pos. resist compn. comprising a base resin and a compd. contg. two to six functional groups, specifically alkenyloxy, acetal and ortho-ester groups in the mol. is suitable for forming a contact hole **pattern** by the thermal flow **process**. The invention also relates to a method for forming a microsize contact hole pattern in the manuf. of VLSI.

IT 150746-92-2 326925-68-2 326925-71-7  
 338438-44-1 338438-45-2

RL: DEV (Device component use); NUU (Other use, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(chem.-amplified pos. resist compn. comprising base

resin and suitable for forming contact-hole pattern by thermal flow in  
VLSI manufg. and contg.)

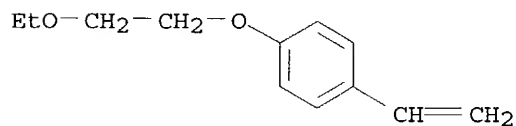
RN 150746-92-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with  
1-ethenyl-4-(2-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX  
NAME)

CM 1

CRN 67521-18-0

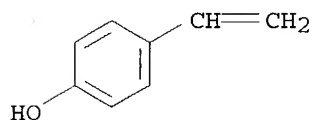
CMF C12 H16 O2



CM 2

CRN 2628-17-3

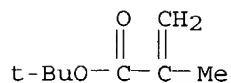
CMF C8 H8 O



CM 3

CRN 585-07-9

CMF C8 H14 O2



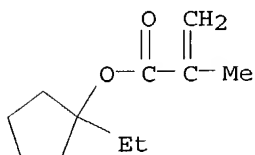
RN 326925-68-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

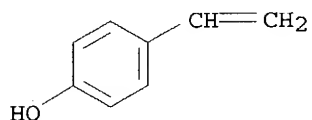
CMF C11 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



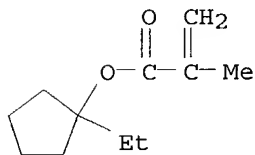
RN 326925-71-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenylphenol (9CI) (CA  
INDEX NAME)

CM 1

CRN 266308-58-1

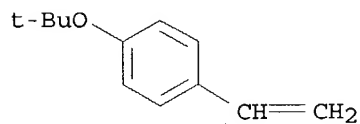
CMF C11 H18 O2



CM 2

CRN 95418-58-9

CMF C12 H16 O



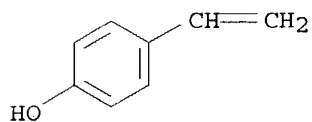
KOROMA EIC1700



CM 3

CRN 2628-17-3

CMF C8 H8 O



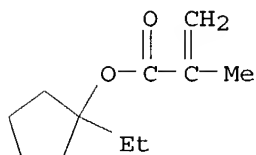
RN 338438-44-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX  
NAME)

CM 1

CRN 266308-58-1

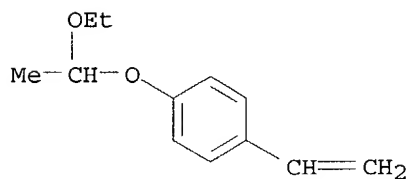
CMF C11 H18 O2



CM 2

CRN 157057-20-0

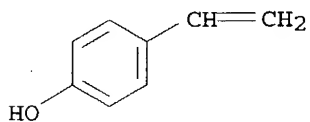
CMF C12 H16 O2



CM 3

CRN 2628-17-3

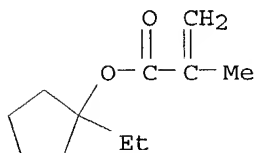
CMF C8 H8 O



RN 338438-45-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
 1,4-bis(ethenyloxy)butane, 1-ethenyl-4-(1-ethoxyethoxy)benzene and  
 4-ethenylphenol (9CI) (CA INDEX NAME)

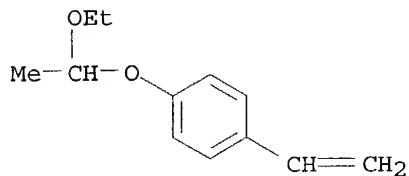
CM 1

CRN 266308-58-1  
 CMF C11 H18 O2



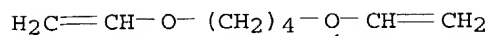
CM 2

CRN 157057-20-0  
 CMF C12 H16 O2



CM 3

CRN 3891-33-6  
 CMF C8 H14 O2

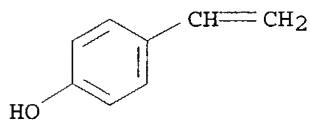


KOROMA EIC1700

CM 4

CRN 2628-17-3

CMF C8 H8 O



- IC ICM G03F007-039  
ICS G03F007-004
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST pos resist alkenyloxy acetal ortho ester contact hole pattern
- IT Positive photoresists  
(chem.-amplified pos. resist compn. comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufg.)
- IT Polyoxyalkylenes, reactions  
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(chem.-amplified pos. resist compn. comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufg. and contg.)
- IT 183-97-1 764-99-8 1067-51-2 3754-60-7 3891-33-6D, 1,4-Butanediol divinyl ether, reaction products with hydroxystyrene homopolymer ethoxyethyl ether 3975-12-0 17351-75-6 19309-29-6 135965-88-7 323193-21-1 338438-46-3 338438-47-4  
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(additive for controlling flow rate in thermal flow process of patterning using chem.-amplified pos. resist compn.)
- IT 24979-70-2D, acetals and esters 147625-42-1D, acetals 150746-92-2 326925-68-2 326925-71-7 338438-44-1 338438-45-2  
RL: DEV (Device component use); NUU (Other use, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(chem.-amplified pos. resist compn. comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufg. and contg.)
- IT 102-71-6, Triethanolamine, reactions  
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(chem.-amplified pos. resist compn. comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufg. and contg.)
- IT 39153-56-5 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane 138529-84-7 161453-44-7 195723-94-5, (4-tert-Butoxyphenyl)diphenylsulfonium 10-camphorsulfonate

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(photoacid generator;; chem.-amplified pos. resist compn. comprising base resin and suitable for forming contact-hole pattern by thermal flow in VLSI manufg. and contg.)

IT 141-78-6, Ethyl acetate, reactions 84540-57-8, Propylene glycol methyl ether acetate

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(solvent for chem.-amplified pos. resist compn. comprising base resin)

IT 11114-17-3, FC 430

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(surfactant for chem.-amplified pos. resist compn. comprising base resin)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 42 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:319603 CAPLUS

DOCUMENT NUMBER: 134:334289

TITLE: Resist composition and **patterning process**

INVENTOR(S): Kinsho, Takeshi; Nishi, Tsunehiro; Hasegawa, Koji; Watanabe, Takeru; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 45 pp.

CODEN: EPXXDW

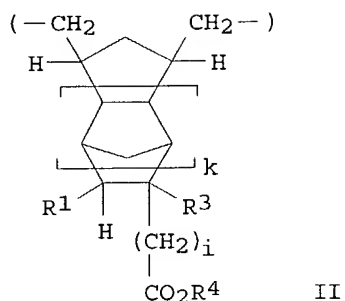
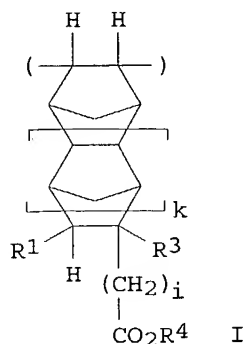
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 1096317	A1	20010502	EP 2000-309391	20001025
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001125271	A2	20010511	JP 1999-302948	19991025
US 6399274	B1	20020604	US 2000-694706	20001024
PRIORITY APPLN. INFO.:			JP 1999-302948	A 19991025
GI				



AB The invention relates to a resist compn. comprising as a base, a polymer having highly reactive acid lability-imparting units and esp. suited as micropatterning material for VLSI fabrication, and a **patterning process** using the resist compn. The resist base resin is a polymer comprising recurring units of the formula (I) or (II) and having a MW of 1,000-500,000. In these formulas, R1 is H, Me or CO2R2, R2 is a straight, branched or cyclic C1-15 alkyl group, R3 is H, Me or CH2CO2R2, R4 is an acid labile group, i is an integer of 1 to 4, and k is 0 or 1. The resist compn. has significantly improved sensitivity, resoln. and etching resistance and is very useful in precise microfabrication.

IT 336617-36-8 336617-38-0 336617-40-4

336617-53-9D, hydrogenated 336617-55-1D, hydrogenated

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(synthesis of polymer having highly reactive acid labile group for **resist compn.** suitable as micropatterning material for VLSI fabrication)

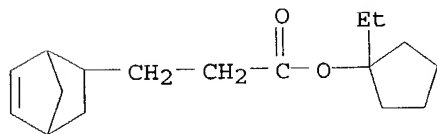
RN 336617-36-8 CAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-propanoic acid, 1-ethylcyclopentyl ester, polymer with spiro[bicyclo[2.2.1]hept-5-ene-2,3'(2'H)-furan]-2',5'(4'H)-dione (9CI) (CA INDEX NAME)

CM 1

CRN 336617-35-7

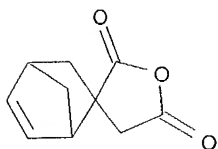
CMF C17 H26 O2



CM 2

CRN 58601-47-1

CMF C10 H10 O3



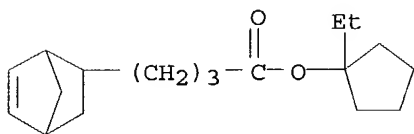
RN 336617-38-0 CAPLUS

CN Bicyclo[2.2.1]hept-2-ene-2-butanoic acid, 1-ethylcyclopentyl ester,  
polymer with spiro[bicyclo[2.2.1]hept-5-ene-2,3' (2'H) -furan]-2',5' (4'H) -  
dione (9CI) (CA INDEX NAME)

CM 1

CRN 336617-37-9

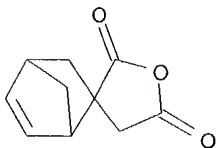
CMF C18 H28 O2



CM 2

CRN 58601-47-1

CMF C10 H10 O3

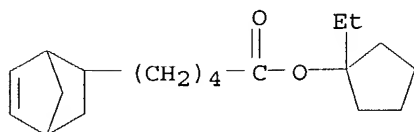


RN 336617-40-4 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-pentanoic acid, 1-ethylcyclopentyl ester,  
polymer with spiro[bicyclo[2.2.1]hept-5-ene-2,3' (2'H) -furan]-2',5' (4'H) -  
dione (9CI) (CA INDEX NAME)

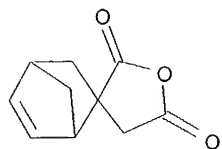
CM 1

CRN 336617-39-1  
CMF C19 H30 O2



CM 2

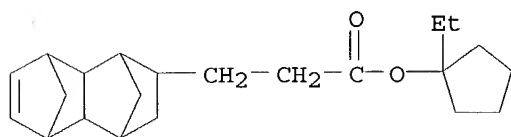
CRN 58601-47-1  
CMF C10 H10 O3



RN 336617-53-9 CAPLUS  
CN 1,4:5,8-Dimethanonaphthalene-2-propanoic acid, 1,2,3,4,4a,5,8,8a-octahydro-, 1-ethylcyclopentyl ester, polymer with spiro[bicyclo[2.2.1]heptane-2,3'-(2'H)-furan]-5'-(4'H)-one (9CI) (CA INDEX NAME)

CM 1

CRN 336617-52-8  
CMF C22 H32 O2



CM 2

CRN 282542-79-4  
CMF C10 H12 O2

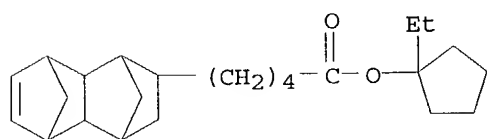


RN 336617-55-1 CAPLUS  
 CN 1,4:5,8-Dimethanonaphthalene-2-pentanoic acid, 1,2,3,4,4a,5,8,8a-octahydro-, 1-ethylcyclopentyl ester, polymer with spiro[bicyclo[2.2.1]heptane-2,3'(2'H)-furan]-5'(4'H)-one (9CI) (CA INDEX NAME)

CM 1

CRN 336617-54-0

CMF C24 H36 O2



CM 2

CRN 282542-79-4

CMF C10 H12 O2



IC ICM G03F007-039  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 ST resist patterning cyclic polymer acid labile group microfabrication  
 IT Carboxyl group  
 Photoresists  
 (synthesis of polymer having highly reactive acid labile group for resist compn. suitable as micropatterning material for VLSI fabrication)  
 IT Polymers, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (synthesis of polymer having highly reactive acid labile group for resist compn. suitable as micropatterning material for VLSI)

KOROMA EIC1700



fabrication)

IT Onium compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis of polymer having highly reactive acid labile group for  
 resist compn. suitable as micropatterning material for VLSI  
 fabrication)

IT 102-71-6, Triethanolamine, reactions 102-82-9, Tributylamine  
 211919-60-7 218770-96-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (acid and diffusion inhibitor;; for resist compn. suitable as  
 micropatterning material for VLSI fabrication)

IT 81-25-4 828-51-3, 1-Adamantanecarboxylic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (additive for resist compn. suitable as micropatterning material for  
 VLSI fabrication)

IT 122752-67-4 336617-56-2 336617-57-3 336617-58-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (dissoln. regulator;; for resist compn. suitable as micropatterning  
 material for VLSI fabrication)

IT 66003-78-9, Triphenylsulfonium triflate 144317-44-2, Triphenylsulfonium  
 perfluorobutanesulfonate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (photoacid generator;; for resist compn. suitable as micropatterning  
 material for VLSI fabrication)

IT 336617-27-7 336617-29-9 336617-31-3 336617-33-5 336617-34-6  
 336617-36-8 336617-38-0 336617-40-4  
 336617-41-5 336617-42-6 336617-45-9D, hydrogenated 336617-47-1D,  
 hydrogenated 336617-49-3D, hydrogenated 336617-51-7D, hydrogenated  
 336617-53-9D, hydrogenated 336617-55-1D, hydrogenated  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); POF (Polymer in formulation); TEM (Technical or engineered  
 material use); PROC (Process); USES (Uses)  
 (synthesis of polymer having highly reactive acid labile group for  
 resist compn. suitable as micropatterning material  
 for VLSI fabrication)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 43 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:208018 CAPLUS

DOCUMENT NUMBER: 134:259202

TITLE: Resist compositions comprising sulfonium photoacid  
 generator for ArF excimer laser lithography and  
**patterning process**

INVENTOR(S): Nishi, Tsunehiro; Ohsawa, Youichi; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 36 pp.  
 CODEN: EPXXDW

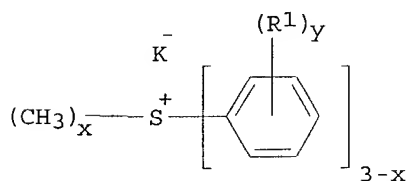
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1085377	A1	20010321	EP 2000-307915	20000913
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001083695	A2	20010330	JP 1999-263257	19990917
US 6420085	B1	20020716	US 2000-663830	20000915
PRIORITY APPLN. INFO.:			JP 1999-263257	A 19990917
OTHER SOURCE(S):		MARPAT 134:259202		
GI				



I

AB In a resist compn. comprising a base resin, a photoacid generator, and a solvent, the photoacid generator is a sulfonium salt of formula I (R1 = hydroxyl, nitro, C1-15 hydrocarbon group; two R1 may form ring together; K- = non-nucleophilic counter ion; x = 1, 2; and y = 0, 1, 2, 3). The base resin is also claimed by general formula. The resist compn. is sensitive to ArF excimer laser light, has good sensitivity and resoln., and forms a thick film which is advantageous in etching.

IT 274248-15-6 330595-97-6 330595-99-8  
330596-00-4

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(resist compns. comprising sulfonium photoacid generator and copolymers for ArF laser lithog. and patterning process)

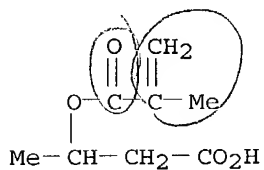
RN 274248-15-6 CAPLUS

CN Butanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-ethylcyclopentyl 2-methyl-2-propenoate and hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271599-23-6

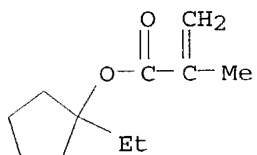
CMF C8 H12 O4



CM 2

CRN 266308-58-1

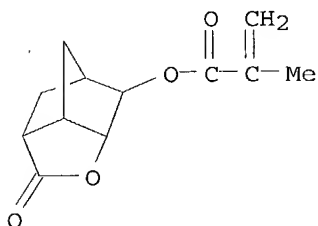
CMF C11 H18 O2



CM 3

CRN 254900-07-7

CMF C12 H14 O4



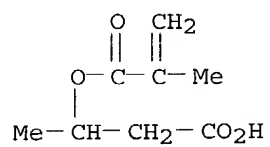
RN 330595-97-6 CAPLUS

CN Butanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-ethylcyclopentyl 2-methyl-2-propenoate, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271599-23-6

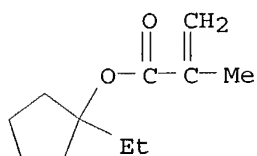
CMF C8 H12 O4



CM 2

CRN 266308-58-1

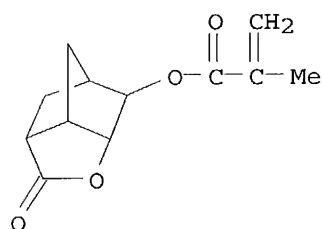
CMF C11 H18 O2



CM 3

CRN 254900-07-7

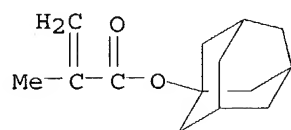
CMF C12 H14 O4



CM 4

CRN 16887-36-8

CMF C14 H20 O2



RN 330595-99-8 CAPLUS

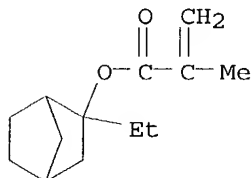
KOROMA EIC1700

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 330595-98-7

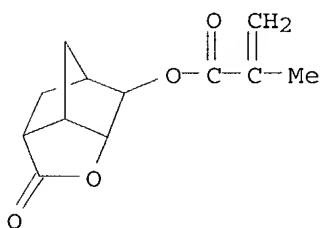
CMF C13 H20 O2



CM 2

CRN 254900-07-7

CMF C12 H14 O4



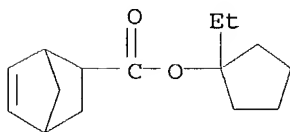
RN 330596-00-4 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1-ethylcyclopentyl ester, polymer with 1-ethylcyclopentyl 2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 279243-69-5

CMF C15 H22 O2

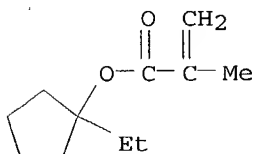


KOROMA EIC1700

CM 2

CRN 266308-58-1

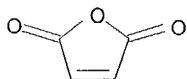
CMF C11 H18 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photoresist deep UV lithog photoacid generator sulfonium salt

IT Photolithography

Photoresists

(UV; resist compns. comprising sulfonium photoacid generator and copolymers for ArF laser lithog. and **patterning process**)

IT Sulfonium compounds

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(arene; resist compns. comprising sulfonium photoacid generator and copolymers for ArF laser lithog. and **patterning process**)

IT Aromatic compounds

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(sulfonium; resist compns. comprising sulfonium photoacid generator and copolymers for ArF laser lithog. and **patterning process**)

IT 85980-21-8 105229-70-7 301152-82-9 330595-91-0 330595-92-1  
330595-93-2 330595-95-4 330595-96-5

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photoacid generator; resist compns. comprising sulfonium photoacid

generator and copolymers for ArF laser lithog. and **patterning process**)

IT 274248-15-6 279244-15-4 330595-97-6  
 330595-99-8 330596-00-4 330596-02-6 330596-03-7  
 330815-64-0D, polymers contg. 330815-93-5D, polymers contg.  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (resist compns. comprising sulfonium photoacid  
 generator and copolymers for ArF laser lithog. and **patterning process**)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 44 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:178377 CAPLUS

DOCUMENT NUMBER: 134:229705

TITLE: Chemically amplified photoresist compositions and process for the formation of stable photoresist patterns

INVENTOR(S): Takechi, Satoshi; Kotachi, Akiko; Nozaki, Koji; Yano, Ei; Watanabe, Keiji; Namiki, Takahisa; Igarashi, Miwa; Makino, Yoko; Takahashi, Makoto

PATENT ASSIGNEE(S): Fujitsu Limited, Japan

SOURCE: U.S., 55 pp., Cont.-in-part of U.S. 6,013,416.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

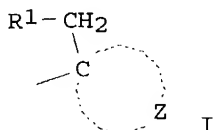
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6200725	B1	20010313	US 1997-969368	19971128
JP 09090637	A2	19970404	JP 1995-312722	19951130
JP 3297272	B2	20020702		
JP 09073173	A2	19970318	JP 1996-50264	19960307
US 6013416	A	20000111	US 1996-673739	19960627
US 5968713	A	19991019	US 1997-896833	19970718
<del>US 2001003640</del>	A1	20010614	US 2000-739259	20001219
US 6329125	B2	20011211		

PRIORITY APPLN. INFO.: JP 1995-162287 A 19950628  
 JP 1995-178717 A 19950714  
 JP 1995-312722 A 19951130  
 JP 1996-50264 A 19960307  
 US 1996-673739 A2 19960627  
 JP 1996-320105 A 19961129  
 US 1997-969368 A3 19971128

GI



AB An alkali-developable, chem. amplified photoresist compn. which comprises (1) an alkali-insol. polymer or copolymer comprising a structural unit contg. a protected alkali-sol. group in which unit a protective moiety of said protected alkali-sol. group contains a group represented by I ( R1 = CH3, C2H5, Pr or i-Pr which may be substituted, Z = atoms necessary to complete an alicyclic hydrocarbon group along with a carbon atom) and (2) a photoacid generator capable of being decompd. upon exposure to a patterning radiation to produce an acid capable of causing cleavage of said protective moiety. The resist compn. can exhibit a high sensitivity (not more than 5 mJ/cm2) and therefore is particularly suitable for ArF lithog. and also can exhibit stable patterning properties.

IT 186585-57-9 186585-60-4 186585-63-7  
186585-66-0 186585-68-2 186585-70-6  
186585-72-8 186585-75-1 186585-84-2

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(chem. amplified **photoresist compns.** comprising  
alkali-insol. polymers or copolymers and photoacid generator)

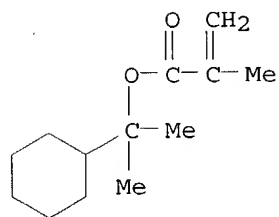
RN 186585-57-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-cyclohexyl-1-methylethyl ester, polymer  
with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-56-8

CMF C13 H22 O2

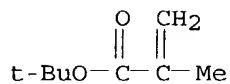


CM 2

CRN 585-07-9

CMF C8 H14 O2





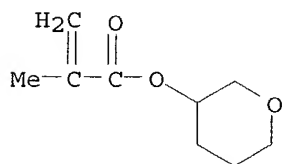
RN 186585-60-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-cyclohexyl-1-methylethyl ester, polymer with tetrahydro-2H-pyran-3-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-59-1

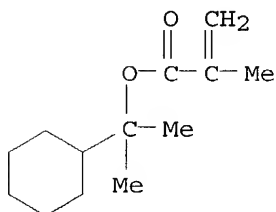
CMF C9 H14 O3



CM 2

CRN 186585-56-8

CMF C13 H22 O2



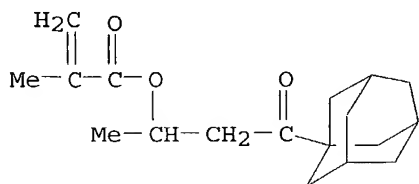
RN 186585-63-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-methyl-3-oxo-3-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-62-6

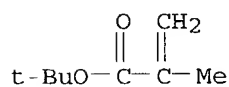
CMF C18 H26 O3



CM 2

CRN 585-07-9

CMF C8 H14 O2



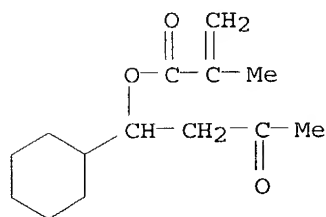
RN 186585-66-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-cyclohexyl-3-oxobutyl ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-65-9

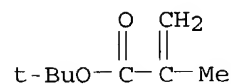
CMF C14 H22 O3



CM 2

CRN 585-07-9

CMF C8 H14 O2



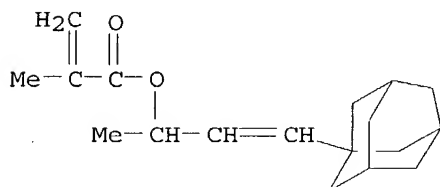
KOROMA EIC1700

RN 186585-68-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with  
 1-methyl-3-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-2-propenyl 2-methyl-2-propenoate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 186585-67-1

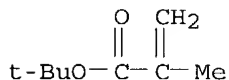
CMF C18 H26 O2



CM 2

CRN 585-07-9

CMF C8 H14 O2

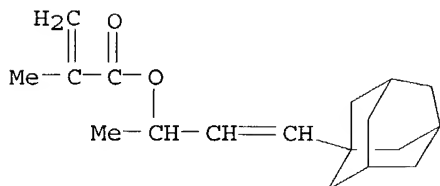


RN 186585-70-6 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1-methyl-3-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-2-  
 propenyl ester, polymer with 3-oxocyclohexyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

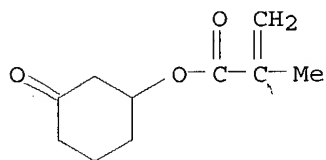
CRN 186585-67-1

CMF C18 H26 O2



CM 2

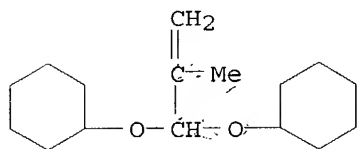
CRN 158602-67-6  
CMF C10 H14 O3



RN 186585-72-8 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with  
1,1'-[(2-methyl-2-propenylidene)bis(oxy)]bis[cyclohexane] (9CI) (CA INDEX  
NAME)

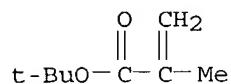
CM 1

CRN 186585-71-7  
CMF C16 H28 O2



CM 2

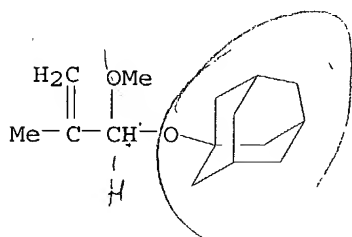
CRN 585-07-9  
CMF C8 H14 O2



RN 186585-75-1 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 3-oxocyclohexyl ester, polymer with  
1-[(1-methoxy-2-methyl-2-propenyl)oxy]tricyclo[3.3.1.1<sup>3,7</sup>]decane (9CI)  
(CA INDEX NAME)

CM 1

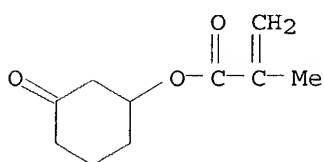
CRN 186585-74-0  
CMF C15 H24 O2



CM 2

CRN 158602-67-6

CMF C10 H14 O3



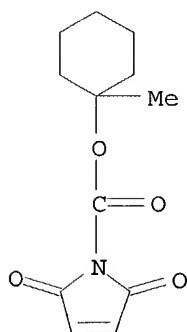
RN 186585-84-2 CAPLUS

CN 1H-Pyrrole-1-carboxylic acid, 2,5-dihydro-2,5-dioxo-, 1-methylcyclohexyl ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-83-1

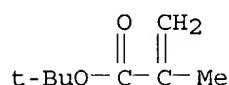
CMF C12 H15 N O4



CM 2

CRN 585-07-9

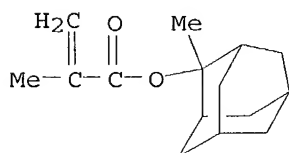
CMF C8 H14 O2



IT 177080-68-1P, 2-Methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 181020-29-1P 181531-12-4P, Methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 181531-13-5P 186585-40-0P 186585-44-4P 186585-47-7P 186585-49-9P 186585-51-3P 186585-88-6P, tert-Butyl methacrylate-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 186585-90-0P 186585-91-1P 186585-92-2P 186585-93-3P 186585-96-6P 186585-97-7P 186585-98-8P 186585-99-9P 186586-00-5P 186586-01-6P 186586-02-7P 186586-03-8P 186586-04-9P 186586-06-1P 186586-08-3P 186586-09-4P 186586-11-8P 209982-55-8P, 2-Butyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 209982-57-0P, 2-Ethyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 209982-58-1P, 2-Butyl-2-adamantyl methacrylate-methacrylic acid copolymer 209982-59-2P 209982-60-5P 238080-51-8P 329690-34-8P 329690-37-1P 329690-38-2P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)  
 RN 177080-68-1 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

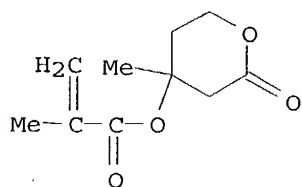
CM 1

CRN 177080-67-0  
 CMF C15 H22 O2



CM 2

CRN 177080-66-9  
 CMF C10 H14 O4



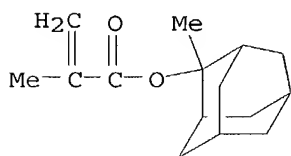
RN 181020-29-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2



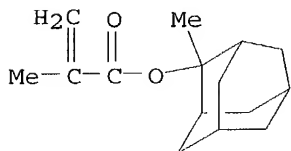
RN 181531-12-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

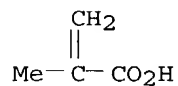


CM 2

CRN 79-41-4

CMF C4 H6 O2

KOROMA EIC1700



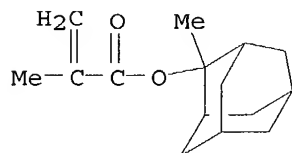
RN 181531-13-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 3-oxocyclohexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

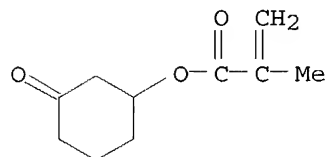
CMF C15 H22 O2



CM 2

CRN 158602-67-6

CMF C10 H14 O3



RN 186585-40-0 CAPLUS

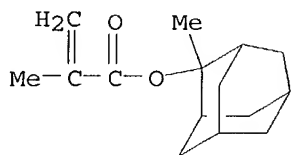
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

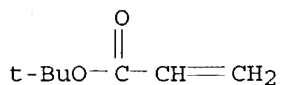




CM 2

CRN 1663-39-4

CMF C7 H12 O2



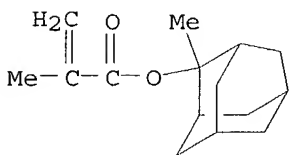
RN 186585-44-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethyl-3-oxobutyl ester, polymer with 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

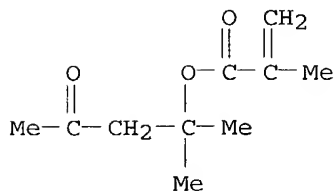
CMF C15 H22 O2



CM 2

CRN 93940-09-1

CMF C10 H16 O3



KOROMA EIC1700

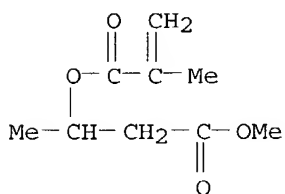
RN 186585-47-7 CAPLUS

CN Butanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, methyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-46-6

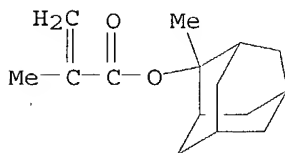
CMF C9 H14 O4



CM 2

CRN 177080-67-0

CMF C15 H22 O2



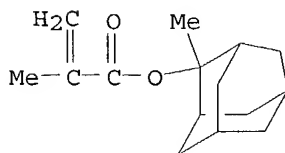
RN 186585-49-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

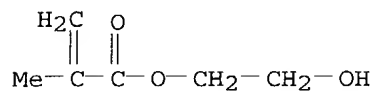


KOROMA EIC1700

CM 2

CRN 868-77-9

CMF C6 H10 O3



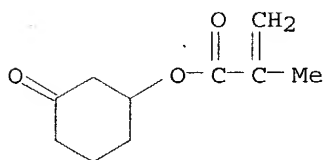
RN 186585-51-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methylcyclohexyl ester, polymer with 3-oxocyclohexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 158602-67-6

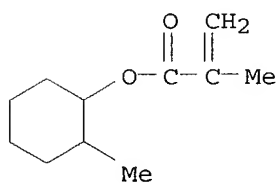
CMF C10 H14 O3



CM 2

CRN 46187-22-8

CMF C11 H18 O2



RN 186585-88-6 CAPLUS

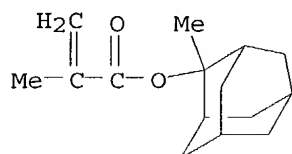
CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

KOROMA EIC1700

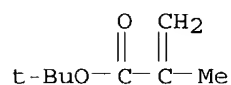
CMF C15 H22 O2



CM 2

CRN 585-07-9

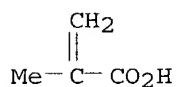
CMF C8 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



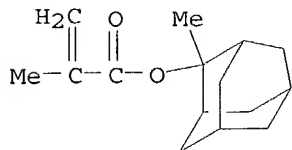
RN 186585-90-0 CAPLUS

CN Butanedioic acid, methylene-, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

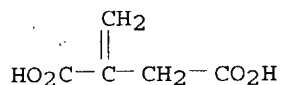


KOROMA EIC1700

CM 2

CRN 97-65-4

CMF C5 H6 O4



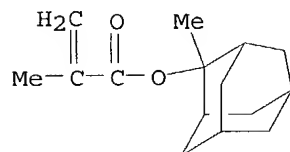
RN 186585-91-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with ethenylbenzenesulfonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

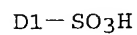
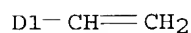


CM 2

CRN 26914-43-2

CMF C8 H8 O3 S

CCI IDS



RN 186585-92-2 CAPLUS

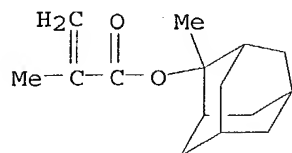
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2-methyl-2-propenamide (9CI) (CA INDEX NAME)

KOROMA EIC1700

CM 1

CRN 177080-67-0

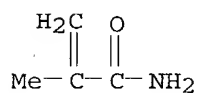
CMF C15 H22 O2



CM 2

CRN 79-39-0

CMF C4 H7 N O



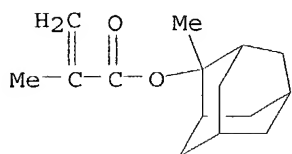
RN 186585-93-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester,  
polymer with 1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

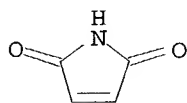
CMF C15 H22 O2



CM 2

CRN 541-59-3

CMF C4 H3 N O2



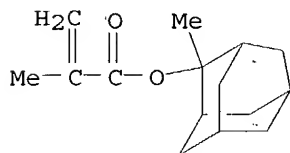
RN 186585-96-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-propenal oxime (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

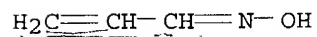
CMF C15 H22 O2



CM 2

CRN 5314-33-0

CMF C3 H5 N O



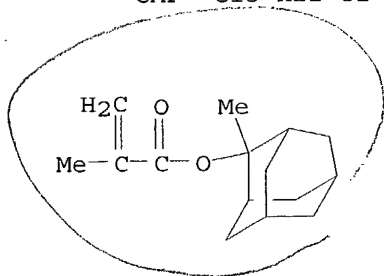
RN 186585-97-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 1,3-dioxol-2-one (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

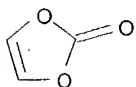
CMF C15 H22 O2



CM 2

CRN 872-36-6

CMF C3 H2 O3



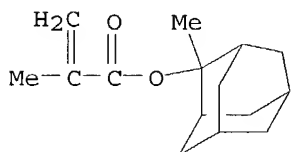
RN 186585-98-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2-ethenyl-4,4-dimethyl-5(4H)-oxazolone (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

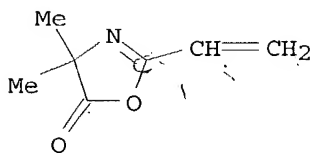
CMF C15 H22 O2



CM 2

CRN 29513-26-6

CMF C7 H9 N O2



RN 186585-99-9 CAPLUS

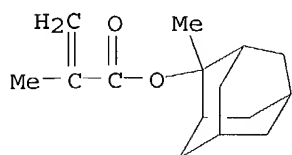
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2-ethenyl-5,6-dihydro-5,5-dimethyl-4H-1,3-oxazine (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

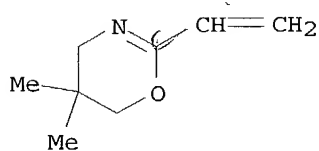




CM 2

CRN 90154-90-8

CMF C8 H13 N O



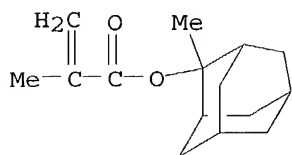
RN 186586-00-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1.3]dec-2-yl ester,  
polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

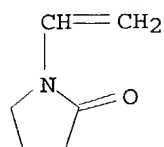
CMF C15 H22 O2



CM 2

CRN 88-12-0

CMF C6 H9 N O



KOROMA EIC1700

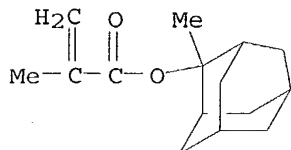
RN 186586-01-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2



CM 2

CRN 107-13-1

CMF C3 H3 N



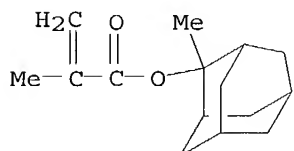
RN 186586-02-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with ethenyl nitrobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

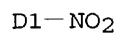
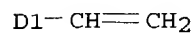


CM 2

CRN 1321-22-8

CMF C8 H7 N O2

CCI IDS



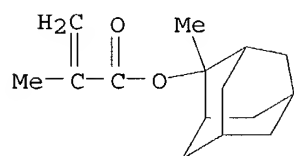
RN 186586-03-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with 2-propenal (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

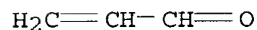
CMF C15 H22 O2



CM 2

CRN 107-02-8

CMF C3 H4 O



RN 186586-04-9 CAPLUS

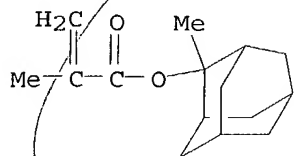
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

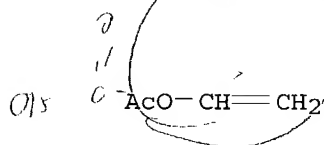
KOROMA EIC1700



CM 2

CRN 108-05-4

CMF C4 H6 O2



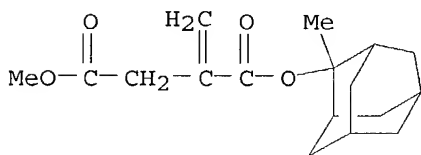
RN 186586-06-1 CAPLUS

CN Butanedioic acid, methylene-, 4-methyl 1-(2-methyltricyclo[3.3.1.1.3,7]dec-2-yl) ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 186586-05-0

CMF C17 H24 O4



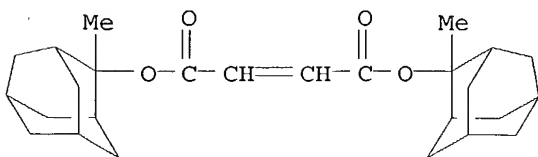
RN 186586-08-3 CAPLUS

CN 2-Butenedioic acid, polymer with bis(2-methyltricyclo[3.3.1.1.3,7]dec-2-yl) 2-butenedioate (9CI) (CA INDEX NAME)

CM 1

CRN 186586-07-2

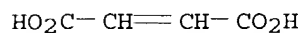
CMF C26 H36 O4



CM 2

CRN 6915-18-0

CMF C4 H4 O4



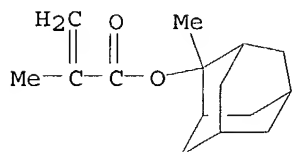
RN 186586-09-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate and 3-oxocyclohexyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 177080-67-0

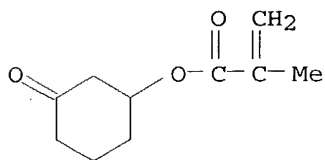
CMF C15 H22 O2



CM 2

CRN 158602-67-6

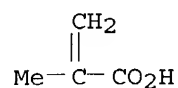
CMF C10 H14 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



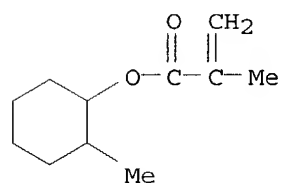
RN 186586-11-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate and 2-methylcyclohexyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 46187-22-8

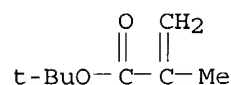
CMF C11 H18 O2



CM 2

CRN 585-07-9

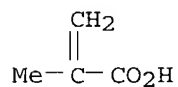
CMF C8 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



RN 209982-55-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-butyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester,  
polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate

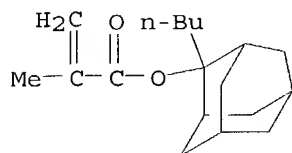
KOROMA EIC1700

(9CI) (CA INDEX NAME)

CM 1

CRN 209982-54-7

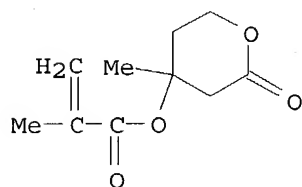
CMF C18 H28 O2



CM 2

CRN 177080-66-9

CMF C10 H14 O4



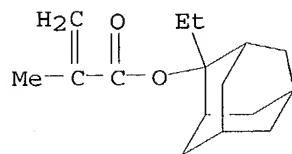
RN 209982-57-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1.3,7]dec-2-yl ester,  
polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 209982-56-9

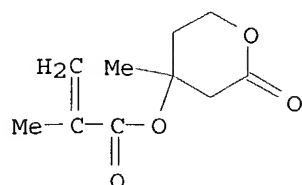
CMF C16 H24 O2



CM 2

CRN 177080-66-9

CMF C10 H14 O4



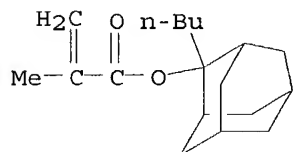
RN 209982-58-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-butyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 209982-54-7

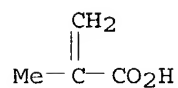
CMF C18 H28 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



RN 209982-59-2 CAPLUS

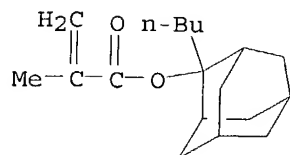
CN 2-Propenoic acid, 2-methyl-, 2-butyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with dihydro-3-methylene-2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 209982-54-7

CMF C18 H28 O2

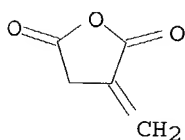




CM 2

CRN 2170-03-8

CMF C5 H4 O3



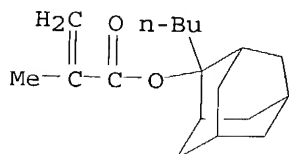
RN 209982-60-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-butyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate and 1,1-dimethylethyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 209982-54-7

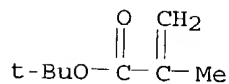
CMF C18 H28 O2



CM 2

CRN 585-07-9

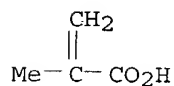
CMF C8 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



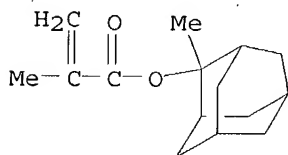
RN 238080-51-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with dihydro-3-methylene-2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

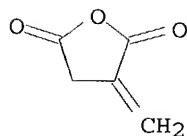
CMF C15 H22 O2



CM 2

CRN 2170-03-8

CMF C5 H4 O3



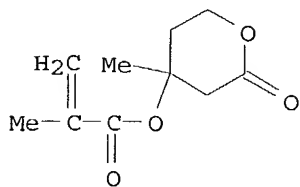
RN 329690-34-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-66-9

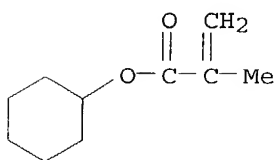
CMF C10 H14 O4



CM 2

CRN 101-43-9

CMF C10 H16 O2



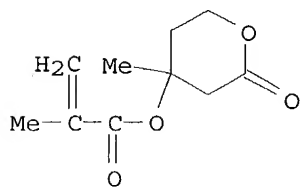
RN 329690-37-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl ester, polymer with tricyclo[3.3.1.1.3,7]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-66-9

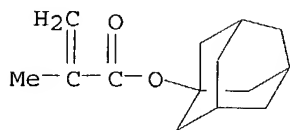
CMF C10 H14 O4



CM 2

CRN 16887-36-8

CMF C14 H20 O2



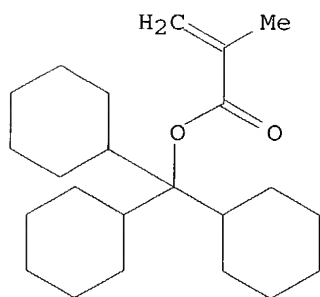
RN 329690-38-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with tricyclohexylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 186585-54-6

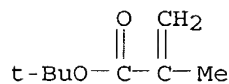
CMF C23 H38 O2



CM 2

CRN 585-07-9

CMF C8 H14 O2



IT 186585-53-5

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)

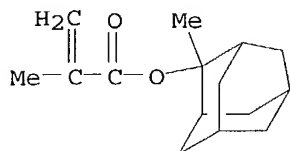
RN 186585-53-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.3^0,3^0]dec-2-yl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

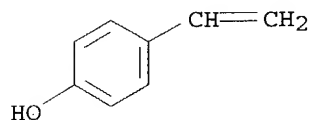
CMF C15 H22 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-039

NCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST chem amplified photoresist UV lithog

IT Photoresists

(chem. amplified photoresist compns. comprising alkali-insol. alkali-developable polymers or copolymers and photoacid generator)

IT 186585-57-9 186585-60-4 186585-63-7

186585-66-0 186585-68-2 186585-70-6

186585-72-8 186585-75-1 186585-78-4 186585-81-9

186585-84-2

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(chem. amplified **photoresist compns.** comprising alkali-insol. polymers or copolymers and photoacid generator)

IT 66003-78-9, Triphenylsulfonium trifluoromethane sulfonate

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photoacid generator; prepn. of alkali-developable chem. amplified photoresist compns. and **process** for formation photoresist **patterns**)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 66003-76-7,

Diphenyliodonium trifluoromethane sulfonate 160481-39-0

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photoacid generator; prepn. of chem. amplified photoresist compns. and

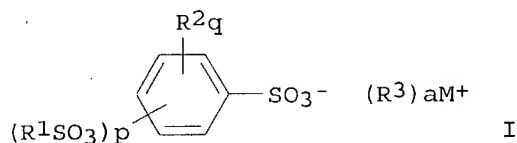
KOROMA EIC1700

- process** for formation photoresist **patterns**)
- IT 329690-35-9P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)
- IT 177080-68-1P, 2-Methyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 181020-29-1P 181531-12-4P, Methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 181531-13-5P 186585-40-0P 186585-44-4P 186585-47-7P 186585-49-9P 186585-51-3P 186585-88-6P, tert-Butyl methacrylate-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 186585-90-0P 186585-91-1P 186585-92-2P 186585-93-3P 186585-96-6P 186585-97-7P 186585-98-8P 186585-99-9P 186586-00-5P 186586-01-6P 186586-02-7P 186586-03-8P 186586-04-9P 186586-06-1P 186586-08-3P 186586-09-4P 186586-11-8P 209982-55-8P, 2-Butyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 209982-57-0P , 2-Ethyl-2-adamantyl methacrylate-mevalonic lactone methacrylate copolymer 209982-58-1P, 2-Butyl-2-adamantyl methacrylate-methacrylic acid copolymer 209982-59-2P 209982-60-5P 238080-51-8P 329690-34-8P 329690-36-0P 329690-37-1P 329690-38-2P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)
- IT 186585-53-5  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)
- IT 177080-66-9P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)
- IT 674-26-0, Mevalonic lactone 920-46-7, Methacryloyl chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of alkali-insol. polymers and copolymers for chem. amplified photoresist compn.)
- IT 59269-51-1, Poly(vinyl phenol) 311814-86-5  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (prepn. of chem. amplified photoresist compns. and **process** for formation photoresist **patterns**)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 45 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2001:133716 CAPLUS  
 DOCUMENT NUMBER: 134:200517  
 TITLE: Novel onium salts as photoacid generators for resist compositions and **patterning process**  
 INVENTOR(S): Ohsawa, Youichi; Watanabe, Jun; Kusaki, Wataru; Watanabe, Satoshi; Nagata, Takeshi; Nagura, Shigehiro  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 77 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1077391	A1	20010221	EP 2000-306997	20000816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001122850	A2	20010508	JP 2000-245564	20000814
US 6440634	B1	20020827	US 2000-637363	20000815
PRIORITY APPLN. INFO.:			JP 1999-230122	A 19990816
			JP 1999-230126	A 19990816
OTHER SOURCE(S):		MARPAT 134:200517		
GI				



AB Disclosed is a chem. amplification type resist compn. that comprises as a photoacid generator novel onium salts of the formula I (R1 = C1-10 alkyl, C6-14 aryl; R2 = H, C1-6 alkyl; p = 1-5, q = 0-4, p+q = 5; R3 = C1-10 alkyl, C6-14 aryl; M = S, I; a = 3 when M=S, 2 when M=I). The chem. amplification type resist comprising the onium salt as a photoacid generator is suited for microfabrication, esp. by deep UV lithog. and has many advantages including improved resoln., minimized line width variation or shape degrdn. even on long-term post-exposure delay, minimized defect after coating, development and stripping, and improved pattern profile after development.

IT 326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate copolymer 326925-70-6 326925-71-7 326925-72-8 326925-73-9

RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoacid generators for **photoresist compns.** based  
 on sulfonium and iodonium salts and polymers which change their soly.

in alk. developer by acid action)

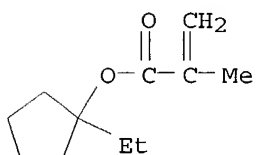
RN 326925-68-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

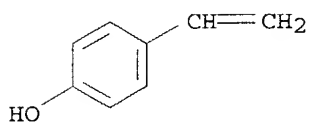
CMF C11 H18 O2



CM 2

CRN 2628-17-3

CMF C8 H8 O



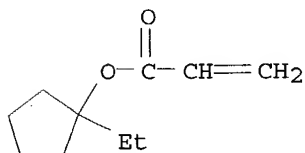
RN 326925-70-6 CAPLUS

CN 2-Propenoic acid, 1-ethylcyclopentyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 326925-69-3

CMF C10 H16 O2

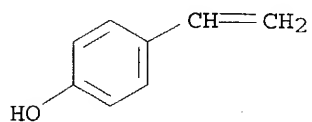


CM 2

CRN 2628-17-3



CMF C8 H8 O



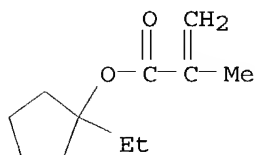
RN 326925-71-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenylphenol (9CI) (CA  
INDEX NAME)

CM 1

CRN 266308-58-1

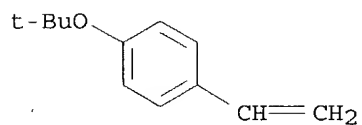
CMF C11 H18 O2



CM 2

CRN 95418-58-9

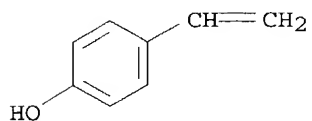
CMF C12 H16 O



CM 3

CRN 2628-17-3

CMF C8 H8 O



KOROMA EIC1700

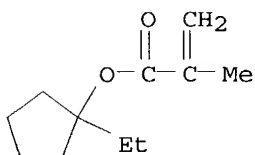
RN 326925-72-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1,2-bis(ethenyloxy)propane and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

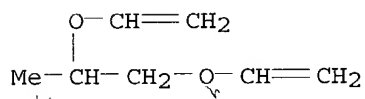
CMF C11 H18 O2



CM 2

CRN 71545-61-4

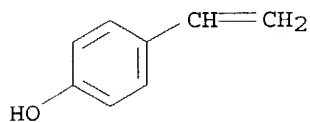
CMF C7 H12 O2



CM 3

CRN 2628-17-3

CMF C8 H8 O



RN 326925-73-9 CAPLUS

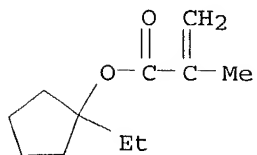
CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with  
1,2-bis(ethenyloxy)propane, 1,1-dimethylethyl 4-ethenylphenyl carbonate  
and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

CMF C11 H18 O2

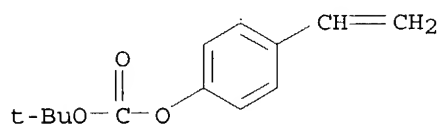
KOROMA EIC1700



CM 2

CRN 87188-51-0

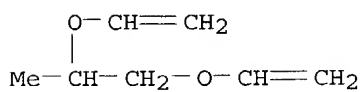
CMF C13 H16 O3



CM 3

CRN 71545-61-4

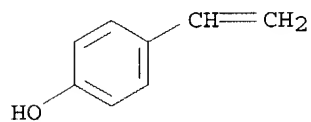
CMF C7 H12 O2



CM 4

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-004

ICS G03F007-039; C07C381-12; C07C309-73; C07C309-71

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

KOROMA EIC1700

- ST onium salt photoacid generator photoresist chem amplified UV lithog  
IT Photolithography  
Photoresists  
(UV; sulfonium and iodonium salts as photoacid generators for chem.  
amplified resist compns. and **patterning process**)
- IT Onium compounds  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
(Synthetic preparation); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); USES (Uses)  
(iodonium; onium salts as photoacid generators for resist compns. and  
**patterning process**)
- IT Sulfonium compounds  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
(Synthetic preparation); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); USES (Uses)  
(sulfonium and iodonium salts as photoacid generators for chem.  
amplified resist compns. and **patterning process**)
- IT 102-82-9, Tri-n-butylamine 3235-51-6, Tris(2-methoxyethyl)amine  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(basic compd.; photoacid generators for photoresist compns. based on  
sulfonium and iodonium salts and **patterning process**  
)
- IT 326925-52-4P 326925-54-6P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN  
(Synthetic preparation); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); USES (Uses)  
(photoacid generator; prepn. of sulfonium and iodonium salts for use in  
photoacid generator)
- IT 326925-60-4P  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN  
(Synthetic preparation); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
(photoacid generator; prepn. of sulfonium and iodonium salts for use in  
photoacid generator)
- IT 326925-55-7P 326925-56-8P 326925-58-0P 326925-59-1P 326925-63-7P  
326925-64-8P 326925-65-9P 326925-66-0P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(photoacid generator; prepn. of sulfonium and iodonium salts for use in  
photoacid generator)
- IT 69-72-7, Salicylic acid, processes 126-00-1  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(photoacid generators for photoresist compns. based on sulfonium and  
iodonium salts and **patterning process**)
- IT 24979-70-2D, Poly(p-hydroxystyrene), ethoxyethyl ether,  
tert-butoxycarbonate and acetate derivs. 71545-61-4D, reaction products  
with poly(p-hydroxystyrene) contg. ether and ester groups  
326925-68-2, p-Hydroxystyrene-1-ethylcyclopentyl methacrylate  
copolymer 326925-70-6 326925-71-7 326925-72-8  
326925-73-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoacid generators for **photoresist compns.** based

- on sulfonium and iodonium salts and polymers which change their soly.  
in alk. developer by acid action)
- IT 98-06-6, tert-Butylbenzene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of onium and sulfonium salts for use in photoacid generator)
- IT 4270-70-6P, Triphenylsulfonium chloride  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. of onium and sulfonium salts for use in photoacid generator)
- IT 161453-44-7 195723-94-5, (4-tert-Butoxyphenyl)diphenylsulfonium  
10-camphorsulfonate  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
engineered material use); PROC (Process); USES (Uses)  
(prepn. of sulfonium and iodonium salts for use in photoacid generator)
- IT 98-09-9, Phenylsulfonyl chloride 98-67-9, 4-Phenolsulfonic acid  
106-43-4, 4-Chlorotoluene 108-90-7, Chlorobenzene, reactions 945-51-7,  
Diphenyl sulfoxide 1774-35-2, Bis(4-methylphenyl)sulfoxide 3972-56-3,  
4-tert-Butylchlorobenzene 7631-90-5, Sodium hydrogen sulfite  
18995-35-2 21286-54-4, 10-Camphorsulfonyl chloride 21799-87-1,  
Potassium hydroquinonesulfonate 91815-55-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of sulfonium and iodonium salts for use in photoacid generator)
- IT 98-59-9P, p-Toluenesulfonyl chloride 22417-22-7P 60872-03-9P  
61358-24-5P 199733-54-5P 246864-24-4P 326925-53-5P 326925-57-9P  
326925-61-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. of sulfonium and iodonium salts for use in photoacid generator)
- IT 97-64-3, Ethyl lactate 84540-57-8, Propylene glycol methyl ether acetate  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(solvent; photoacid generators for photoresist compns. based on  
sulfonium and iodonium salts and **patterning process**  
)
- IT 39153-56-5, Bis(2,4-dimethylphenylsulfonyl)diazomethane 138529-81-4,  
Bis(cyclohexylsulfonyl)diazomethane 138529-84-7, Bis(tert-  
butylsulfonyl)diazomethane 205514-94-9  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
engineered material use); PROC (Process); USES (Uses)  
(sulfonium and iodonium salts for use in photoacid generator)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 46 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:608477 CAPLUS

DOCUMENT NUMBER: 133:215453

TITLE: Novel ester compounds, polymers, resist compositions  
and **patterning process**

INVENTOR(S): Kinsho, Takeshi; Nishi, Tsunehiro; Kurihara, Hideshi;  
Nakashima, Mutsuo; Hasegawa, Koji; Watanabe, Takeru

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 71 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1031879	A1	20000830	EP 2000-301523	20000225
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000309611	A2	20001107	JP 1999-174945	19990622
KR 2000058167	A	20000925	KR 2000-8963	20000224
US 6284429	B1	20010904	US 2000-512108	20000224

PRIORITY APPLN. INFO.:  
 JP 1999-47406 A 19990225  
 JP 1999-174945 A 19990622

AB A novel ester compd. having an exo-form 2-alkylbicyclo[2.2.1]heptan-2-yl group as the protective group is provided as well as a polymer comprising units of the ester compd. The polymer is used as a base resin to formulate a resist compn. having a higher sensitivity, resoln. and etching resistance than conventional resist compns.

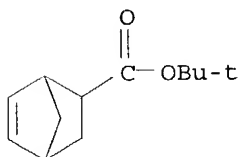
IT 271599-55-4P 290334-98-4P 290334-99-5P  
 290808-80-9P 290808-81-0P 290808-83-2P  
 290808-92-3P 290809-00-6P 290809-02-8P  
 290809-03-9P 290809-04-0P 290809-08-4P  
 290809-11-9P 290809-12-0P 290809-26-6P  
 RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (novel ester compds., polymers, **resist compns.** and **patterning process**)

RN 271599-55-4 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2,5-furandione and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

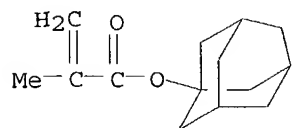
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CRN 154970-45-3  
 CMF C12 H18 O2



CM 2

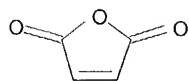
CRN 16887-36-8  
 CMF C14 H20 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



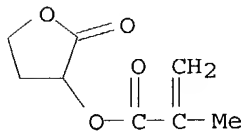
RN 290334-98-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 195000-66-9

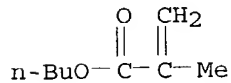
CMF C8 H10 O4



CM 2

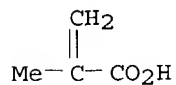
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CMF C8 H14 O2



CM 3

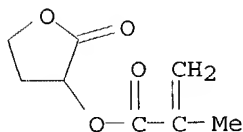
CRN 79-41-4  
CMF C4 H6 O2



RN 290334-99-5 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

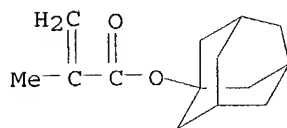
CM 1

CRN 195000-66-9  
CMF C8 H10 O4



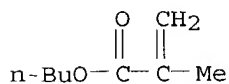
CM 2

CRN 16887-36-8  
CMF C14 H20 O2



CM 3

CRN 97-88-1  
CMF C8 H14 O2



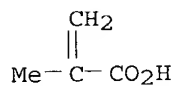
KOROMA EIC1700



CM 4

CRN 79-41-4

CMF C4 H6 O2



RN 290808-80-9 CAPLUS

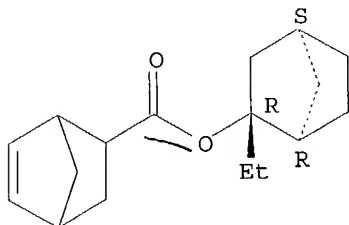
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2,5-furandione and 3-[(2-methyl-1-oxo-2-propenyl)oxy]butanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

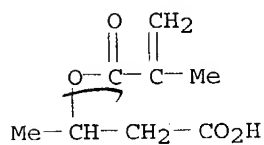
Relative stereochemistry.



CM 2

CRN 271599-23-6

CMF C8 H12 O4

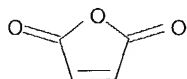


CM 3

CRN 108-31-6

CMF C4 H2 O3

KOROMA EIC1700



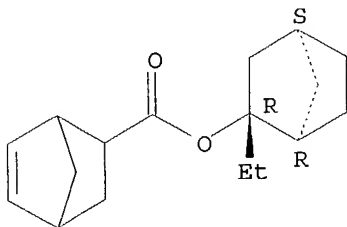
RN 290808-81-0 CAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2,5-furandione and 4-[(2-methyl-1-oxo-2-propenyl)oxy]cyclohexanecarboxylic acid (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

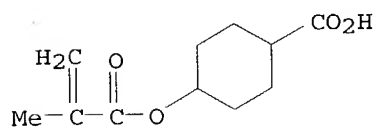
Relative stereochemistry.



CM 2

CRN 279244-24-5

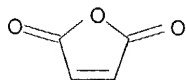
CMF C11 H16 O4



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290808-83-2 CAPLUS

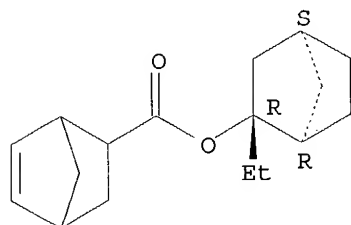
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

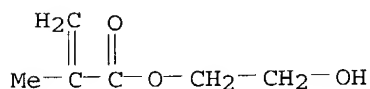
Relative stereochemistry.



CM 2

CRN 868-77-9

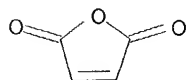
CMF C6 H10 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290808-92-3 CAPLUS

KOROMA EIC1700

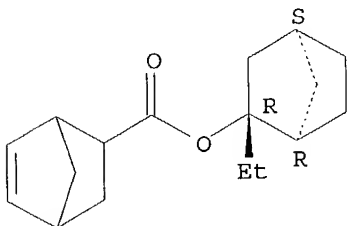
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2,5-furandione and (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

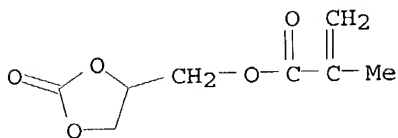
Relative stereochemistry.



CM 2

CRN 13818-44-5

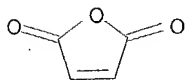
CMF C8 H10 O5



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290809-00-6 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

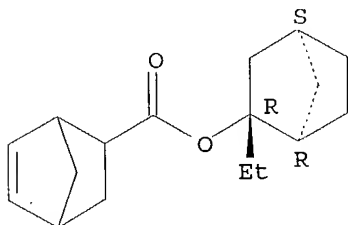
KOROMA EIC1700

CM 1

CRN 290808-30-9

CMF C17 H24 O2

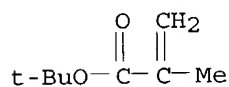
Relative stereochemistry.



CM 2

CRN 585-07-9

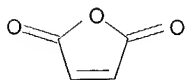
CMF C8 H14 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290809-02-8 CAPLUS

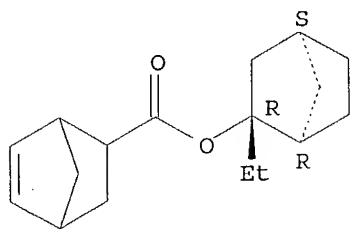
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 1-ethoxyethyl 2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

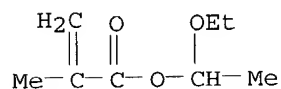
Relative stereochemistry.



CM 2

CRN 51920-52-6

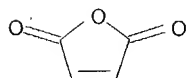
CMF C8 H14 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290809-03-9 CAPLUS

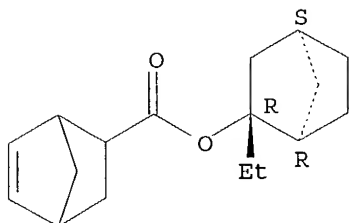
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

Relative stereochemistry.

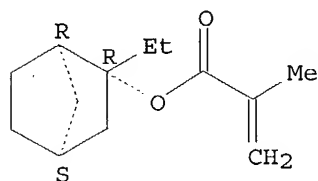


CM 2

CRN 271598-68-6

CMF C13 H20 O2

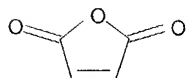
Relative stereochemistry.



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290809-04-0 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with rel-(3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

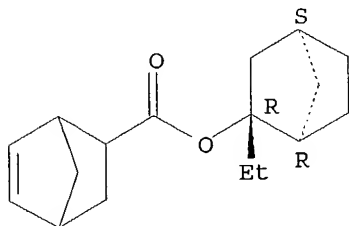
CM 1

CRN 290808-30-9

CMF C17 H24 O2

Relative stereochemistry.

KOROMA EIC1700

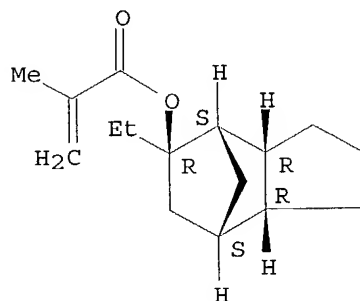


CM 2

CRN 271598-65-3

CMF C16 H24 O2

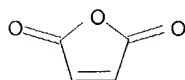
Relative stereochemistry.



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290809-08-4 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2,5-furandione and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

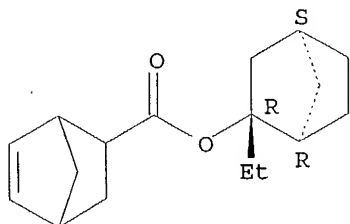
CM 1

CRN 290808-30-9

CMF C17 H24 O2



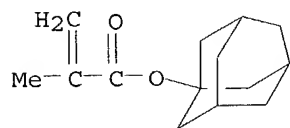
Relative stereochemistry.



CM 2

CRN 16887-36-8

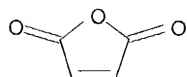
CMF C14 H20 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 290809-11-9 CAPLUS

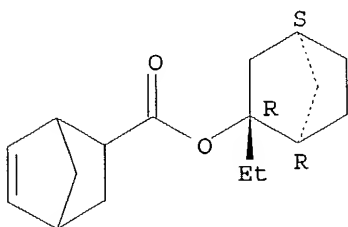
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, 2,5-furandione and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

Relative stereochemistry.

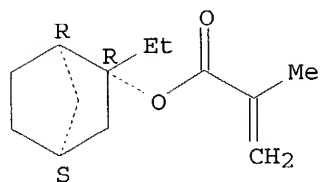


CM 2

CRN 271598-68-6

CMF C13 H20 O2

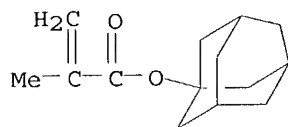
Relative stereochemistry.



CM 3

CRN 16887-36-8

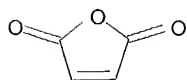
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CM 4

CRN 108-31-6

CMF C4 H2 O3



RN 290809-12-0 CAPLUS

KOROMA EIC1700

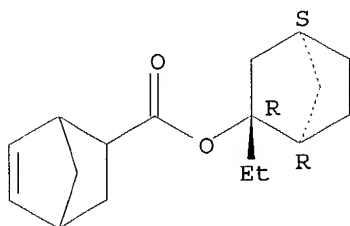
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with rel-(3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate, 2,5-furandione and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

Relative stereochemistry.

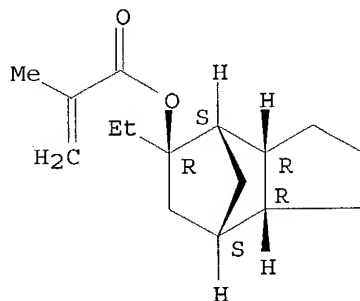


CM 2

CRN 271598-65-3

CMF C16 H24 O2

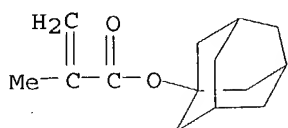
Relative stereochemistry.



CM 3

CRN 16887-36-8

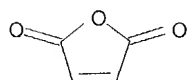
CMF C14 H20 O2



CM 4

CRN 108-31-6

CMF C4 H2 O3



RN 290809-26-6 CAPLUS

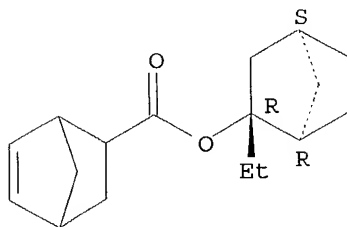
CM Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with  
rel- (1R,2R,4S) -2-ethylbicyclo[2.2.1]hept-2-yl bicyclo[2.2.1]hept-5-ene-2-  
carboxylate and tricyclo[3.3.1.1.3]dec-1-yl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 290808-30-9

CMF C17 H24 O2

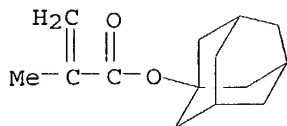
Relative stereochemistry.



CM 2

CRN 16887-36-8

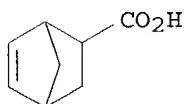
CMF C14 H20 O2



CM 3

CRN 120-74-1

CMF C8 H10 O2



IC ICM G03F007-039

ICS C08F020-68; C07C069-75

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST ester polymer photoresist

IT Photolithography

Photoresists

(novel ester compds., polymers, resist compns. and **patterning process**)

IT 14159-45-6 34684-40-7 71682-26-3 138529-81-4 138529-84-7

141573-11-7 161453-44-7 180801-55-2

RL: CAT (Catalyst use); USES (Uses)

(novel ester compds., polymers, resist compns. and **patterning process**)

IT 195154-78-0P 195154-83-7P **271599-55-4P** 271599-56-5P  
**290334-98-4P** **290334-99-5P** 290808-54-7P 290808-55-8P  
 290808-56-9P 290808-57-0P 290808-58-1P 290808-59-2P 290808-60-5P  
 290808-61-6P 290808-62-7P 290808-63-8P 290808-64-9P 290808-65-0P  
 290808-66-1P 290808-67-2P 290808-68-3P 290808-69-4P 290808-70-7P  
 290808-71-8P 290808-72-9P 290808-73-0P 290808-75-2P 290808-76-3P  
 290808-77-4P 290808-78-5P 290808-79-6P **290808-80-9P**  
**290808-81-0P** 290808-82-1P **290808-83-2P** 290808-84-3P  
 290808-85-4P 290808-86-5P 290808-87-6P 290808-88-7P 290808-89-8P  
 290808-90-1P 290808-91-2P **290808-92-3P** 290808-93-4P  
 290808-94-5P 290808-95-6P 290808-96-7P 290808-97-8P 290808-99-0P  
**290809-00-6P** 290809-01-7P **290809-02-8P**  
**290809-03-9P** **290809-04-0P** 290809-05-1P 290809-06-2P  
 290809-07-3P **290809-08-4P** 290809-10-8P **290809-11-9P**  
**290809-12-0P** 290809-13-1P 290809-14-2P 290809-15-3P  
 290809-16-4P 290809-17-5P 290809-18-6P 290809-19-7P 290809-20-0P  
 290809-21-1P 290809-22-2P 290809-23-3P 290809-24-4P 290809-25-5P

KOROMA EIC1700

290809-26-6P 290809-27-7P 290809-28-8P

RL: POF (Polymer in formulation); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (novel ester compds., polymers, **resist compns.** and **patterning process**)

IT 74-96-4 108-31-6, 2,5-Furandione, reactions 497-38-1, Bicyclo[2.2.1]heptan-2-one 2146-40-9 27063-48-5 37165-59-6 37165-60-9

RL: RCT (Reactant); RACT (Reactant or reagent) (novel ester compds., polymers, resist compns. and **patterning process**)

IT 290808-30-9P 290808-31-0P 290808-32-1P 290808-33-2P 290808-34-3P 290808-35-4P 290808-36-5P 290808-37-6P 290808-38-7P 290808-39-8P 290808-40-1P 290808-41-2P 290808-42-3P 290808-43-4P 290808-44-5P 290808-45-6P 290808-46-7P 290808-47-8P 290808-48-9P 290808-49-0P 290808-50-3P 290808-51-4P 290808-52-5P 290808-53-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(novel ester compds., polymers, resist compns. and **patterning process**)

IT 4942-47-6, Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-acetic acid 117458-06-7 166597-59-7 290335-03-4 290335-04-5

RL: TEM (Technical or engineered material use); USES (Uses) (novel ester compds., polymers, resist compns. and **patterning process**)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 47 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:551263 CAPLUS

DOCUMENT NUMBER: 133:170243

TITLE: Resist patterning method

INVENTOR(S): Imai, Kenji; Kogure, Hideo

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000221691	A2	20000811	JP 1999-27631	19990204
PRIORITY APPLN. INFO.:			JP 1999-27631	19990204

AB The resist **patterning** method comprises a **process** to prep. a resist film comprised of a visible-light-sensitive pos.-working upper layer contg. UV-absorbers and a UV-light-sensitive neg.-working lower layer, a **process** to **pattern** the upper layer with the visible light, and a **process** to **pattern** the lower layer with the UV light.

IT 30400-34-1, Acrylic acid-butyl acrylate-glycidyl

methacrylate-methyl methacrylate copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(UV-light-sensitive neg.-working photoresist compn.

for 2 step resist patterning with visible and UV light)

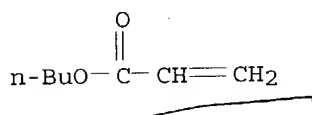
RN 30400-34-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic acid  
(9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

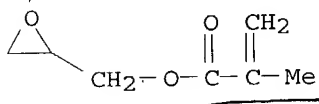
CMF C7 H12 O2



CM 2

CRN 106-91-2

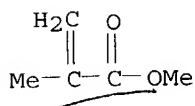
CMF C7 H10 O3



CM 3

CRN 80-62-6

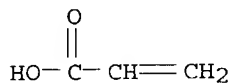
CMF C5 H8 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



IT 161613-66-7, Acrylic acid-butyl acrylate-p-hydroxystyrene copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(visible-light-sensitive pos.-working **photoresist**  
**compn.** for 2 step **resist** patterning with visible and  
UV light)

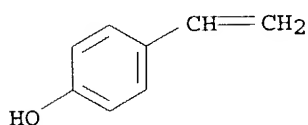
RN 161613-66-7 CAPLUS

CN 2-Propenoic acid, polymer with butyl 2-propenoate and 4-ethenylphenol  
(9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

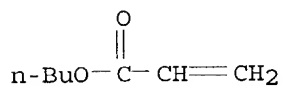
CMF C8 H8 O



CM 2

CRN 141-32-2

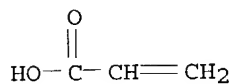
CMF C7 H12 O2



CM 3

CRN 79-10-7

CMF C3 H4 O2





IC ICM G03F007-26  
ICS G03F007-004; G03F007-095; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST resist patterning method photolithog photoresist  
IT Photolithography  
Photoresists  
(2 step resist patterning method with visible and UV light)  
IT 30400-34-1, Acrylic acid-butyl acrylate-glycidyl methacrylate-methyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(UV-light-sensitive neg.-working photoresist compn.  
for 2 step resist patterning with visible and UV light)  
IT 161613-66-7, Acrylic acid-butyl acrylate-p-hydroxystyrene copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(visible-light-sensitive pos.-working photoresist compn. for 2 step resist patterning with visible and UV light)

L30 ANSWER 48 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:367047 CAPLUS

DOCUMENT NUMBER: 133:18002

TITLE: Ester monomers, polymers, resist compositions and patterning process

INVENTOR(S): Kinsho, Takeshi; Nishi, Tsunehiro; Kurihara, Hideshi; Hasegawa, Koji; Watanabe, Takeru; Watanabe, Osamu; Nakashima, Mutsuo; Takeda, Takanobu; Hatakeyama, Jun

PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 65 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1004568	A2	20000531	EP 1999-308687	19991102
EP 1004568	A3	20010228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000336121	A2	20001205	JP 1999-307148	19991028
KR 2000035130	A	20000626	KR 1999-47904	19991101
US 6312867	B1	20011106	US 1999-431139	19991101
PRIORITY APPLN. INFO.:			JP 1998-312533	A 19981102
			JP 1999-75355	A 19990319
AB An ester compd. having an exo-form 2-alkylbicyclo[2.2.1]heptan-2-yl group as the protective group is provided as well as a polymer comprising units of the ester compd. The polymer is used as a base resin to formulate a resist compn. having a higher sensitivity, resoln. and etching resistance than conventional resist compns. A polymer was prepd. from				

8-ethyltricyclo[5.2.1.0<sup>2,6</sup>]decan-8-yl methacrylate and  
5-methyl-2-oxooxolan-5-yl methacrylate.

IT 155040-27-0P 258871-96-4P 271598-71-1P  
271598-72-2P 271598-73-3P 271598-74-4P  
271598-75-5P 271598-76-6P 271598-78-8P  
271598-81-3P 271598-84-6P 271598-86-8P  
271598-89-1P 271598-91-5P 271598-94-8P  
271598-97-1P 271599-00-9P 271599-03-2P  
271599-06-5P 271599-09-8P 271599-11-2P  
271599-14-5P 271599-16-7P 271599-18-9P  
271599-21-4P 271599-24-7P 271599-26-9P  
271599-28-1P 271599-30-5P 271599-32-7P  
271599-33-8P 271599-34-9P 271599-35-0P  
271599-36-1P 271599-37-2P 271599-38-3P  
271599-39-4P 271599-40-7P 271599-41-8P  
271599-42-9P 271599-43-0P 271599-44-1P  
271599-45-2P 271599-46-3P 271599-47-4P  
271599-48-5P 271599-49-6P 271599-50-9P  
271599-51-0P 271599-52-1P 271599-53-2P  
271599-54-3P 271599-55-4P 271599-61-2P  
271779-09-0P 271779-10-3P 271779-11-4P  
271779-12-5P 271779-13-6P 271779-14-7P  
271779-15-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(ester monomers, polymers, **resist compns.** and  
**patterning process**)

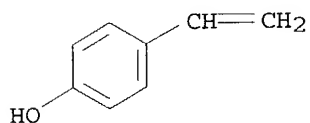
RN 155040-27-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with  
4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

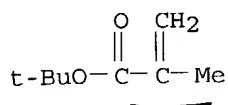
CMF C8 H8 O



CM 2

CRN 585-07-9

CMF C8 H14 O2



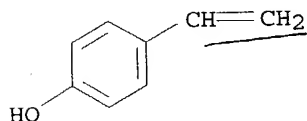
RN 258871-96-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 2628-17-3

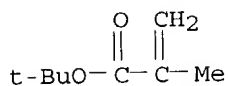
CMF C8 H8 O



CM 2

CRN 585-07-9

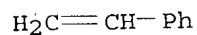
CMF C8 H14 O2



CM 3

CRN 100-42-5

CMF C8 H8



RN 271598-71-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

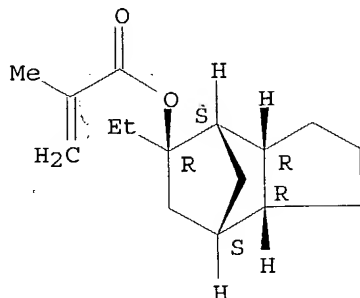
CM 1

CRN 271598-65-3

KOROMA EIC1700

CMF C16 H24 O2

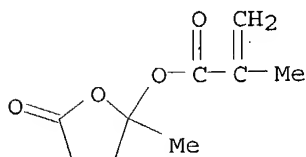
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-72-2 CAPLUS

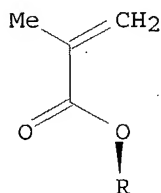
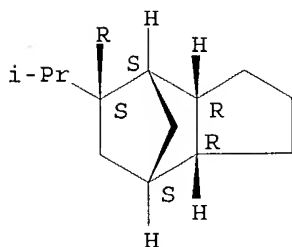
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-66-4

CMF C17 H26 O2

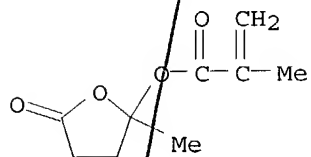
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-73-3 CAPLUS

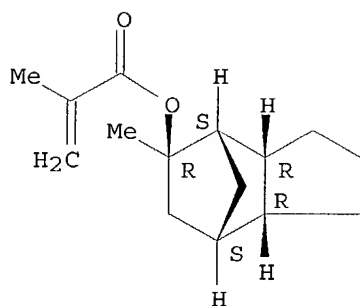
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-octahydro-5-methyl-4,7-methano-1H-inden-5-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-67-5

CMF C15 H22 O2

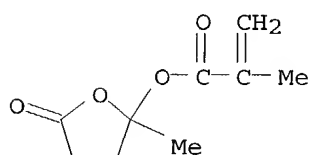
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-74-4 CAPLUS

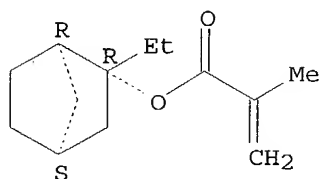
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-68-6

CMF C13 H20 O2

Relative stereochemistry.

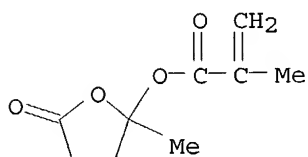


CM 2

CRN 220196-47-4

CMF C9 H12 O4

KOROMA EIC1700

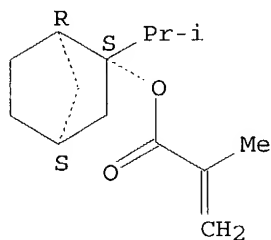


RN 271598-75-5 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (1R,2S,4S)-2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

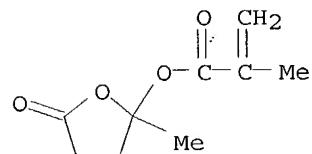
CRN 271598-69-7  
 CMF C14 H22 O2

Relative stereochemistry.



CM 2

CRN 220196-47-4  
 CMF C9 H12 O4



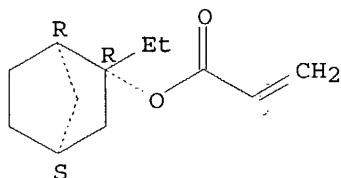
RN 271598-76-6 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, tetrahydro-2-methyl-5-oxo-2-furanyl ester, polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-70-0

CMF C12 H18 O2

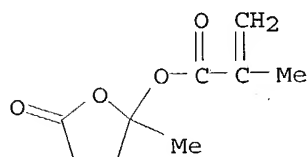
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-78-8 CAPLUS

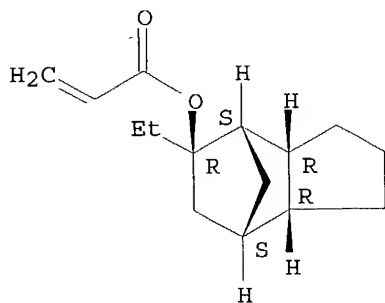
CN 2-Propenoic acid, 2-methyl-, tetrahydro-2-methyl-5-oxo-2-furanyl ester, polymer with rel- (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-77-7

CMF C15 H22 O2

Relative stereochemistry.



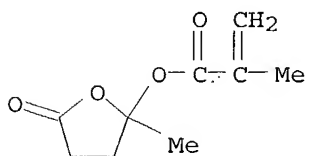
KOROMA EIC1700



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-81-3 CAPLUS

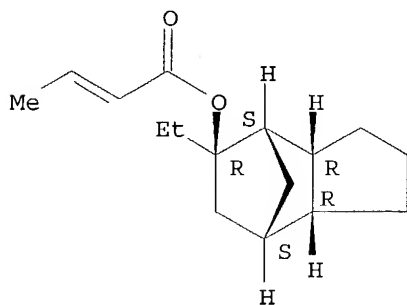
CN 2-Butenoic acid, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-80-2

CMF C16 H24 O2

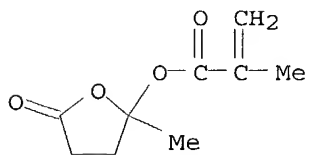
Relative stereochemistry.  
Double bond geometry unknown.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



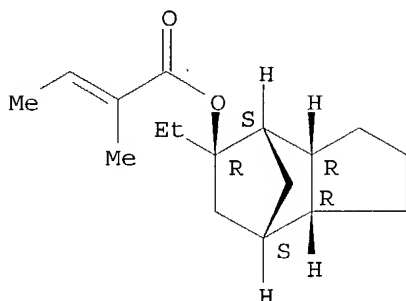
KOROMA EIC1700

RN 271598-84-6 CAPLUS  
CN 2-Butenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

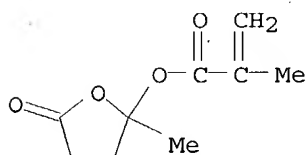
CRN 271598-83-5  
CMF C17 H26 O2

Relative stereochemistry.  
Double bond geometry unknown.



CM 2

CRN 220196-47-4  
CMF C9 H12 O4

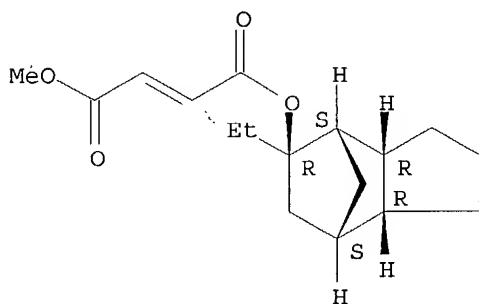


RN 271598-86-8 CAPLUS  
CN 2-Butenedioic acid, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl methyl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-85-7  
CMF C17 H24 O4

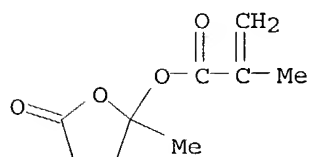
Relative stereochemistry.  
Double bond geometry unknown.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-89-1 CAPLUS

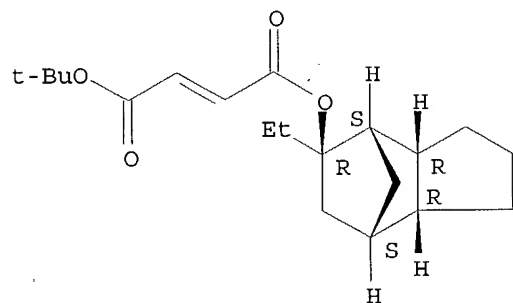
CN 2-Butenedioic acid, 1,1-dimethylethyl (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-88-0

CMF C20 H30 O4

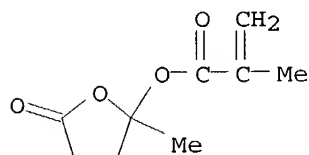
Relative stereochemistry.  
Double bond geometry unknown.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271598-91-5 CAPLUS

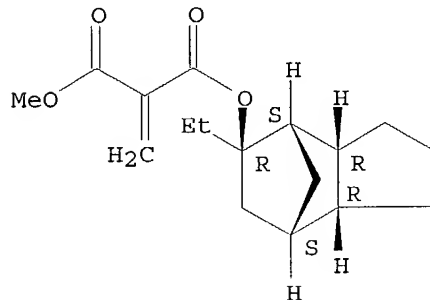
CN Propanedioic acid, methylene-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl methyl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-90-4

CMF C17 H24 O4

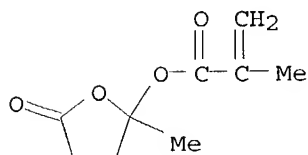
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



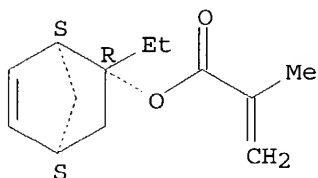
KOROMA EIC1700

RN 271598-94-8 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (1R,2S,4R)-2-ethylbicyclo[2.2.1]hept-5-en-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

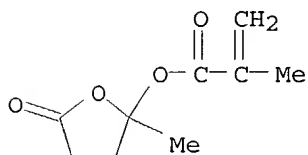
CRN 271598-93-7  
 CMF C13 H18 O2

Relative stereochemistry.



CM 2

CRN 220196-47-4  
 CMF C9 H12 O4

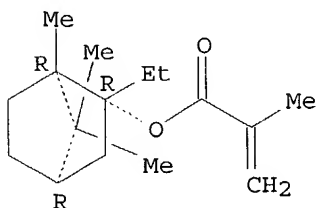


RN 271598-97-1 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-2-ethyl-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-96-0  
 CMF C16 H26 O2

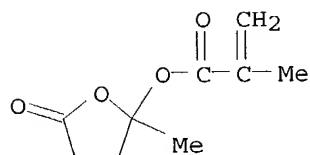
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271599-00-9 CAPLUS

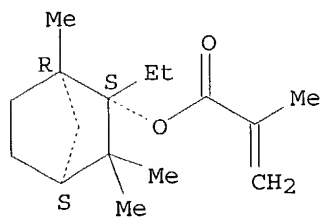
CN 2-Propenoic acid, 2-methyl-, (1R,2S,4S)-2-ethyl-1,3,3-trimethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-99-3

CMF C16 H26 O2

Relative stereochemistry.

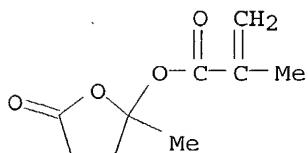


CM 2

CRN 220196-47-4

CMF C9 H12 O4

KOROMA EIC1700



RN 271599-03-2 CAPLUS

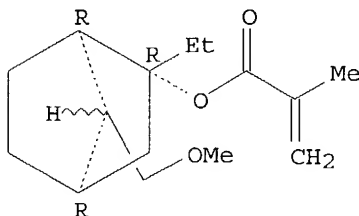
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4R)-2-ethyl-7-(methoxymethyl)bicyclo[2.2.1]hept-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271599-02-1

CMF C15 H24 O3

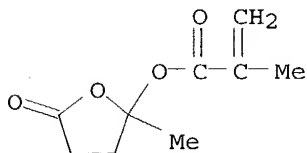
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271599-06-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (2R,4S)-2-ethyl-1-(methoxymethyl)bicyclo[2.2.1]hept-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

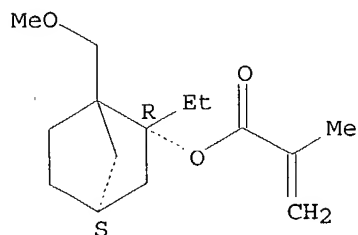
CM 1

KOROMA EIC1700

CRN 271599-05-4

CMF C15 H24 O3

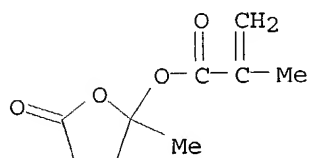
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271599-09-8 CAPLUS

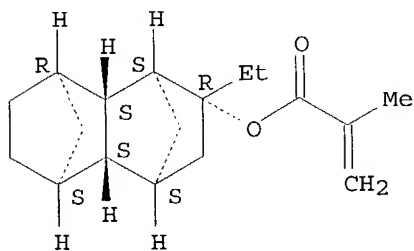
CN 2-Propenoic acid, 2-methyl-, (1R,2S,4R,4aR,5R,8S,8aR)-2-ethyldecahydro-1,4:5,8-dimethanonaphthalen-2-yl ester, rel-, polymer with tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271599-08-7

CMF C18 H26 O2

Relative stereochemistry.



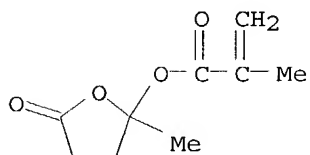
KOROMA EIC1700



CM 2

CRN 220196-47-4

CMF C9 H12 O4



RN 271599-11-2 CAPLUS

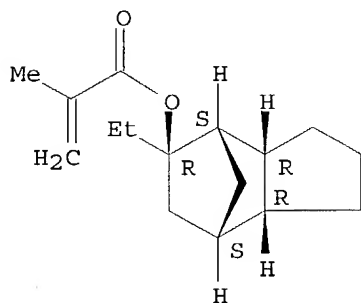
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and tetrahydro-2-methyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

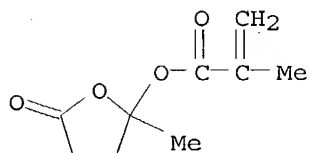
Relative stereochemistry.



CM 2

CRN 220196-47-4

CMF C9 H12 O4

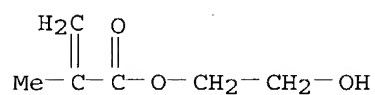


KOROMA EIC1700

CM 3

CRN 868-77-9

CMF C6 H10 O3



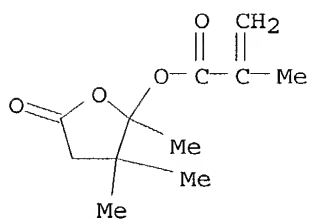
RN 271599-14-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and tetrahydro-2,3,3-trimethyl-5-oxo-2-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271599-13-4

CMF C11 H16 O4

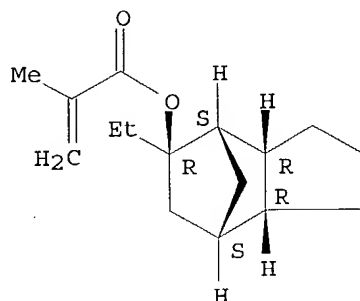


CM 2

CRN 271598-65-3

CMF C16 H24 O2

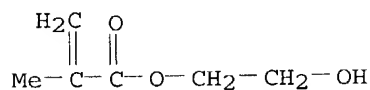
Relative stereochemistry.



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 271599-16-7 CAPLUS

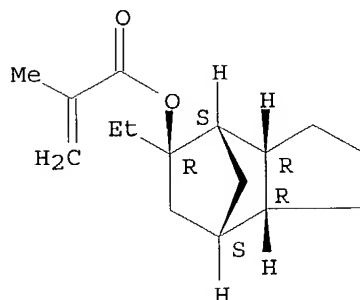
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

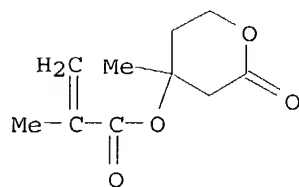
Relative stereochemistry.



CM 2

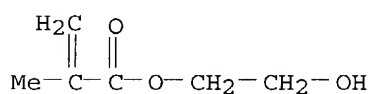
KOROMA EIC1700

CRN 177080-66-9  
CMF C10 H14 O4



CM 3

CRN 868-77-9  
CMF C6 H10 O3

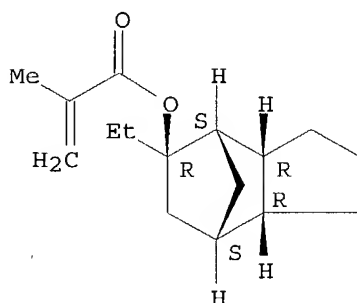


RN 271599-18-9 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3  
CMF C16 H24 O2

Relative stereochemistry.

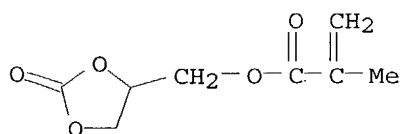


CM 2

KOROMA EIC1700

CRN 13818-44-5

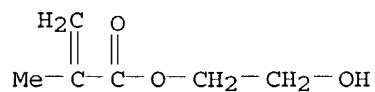
CMF C8 H10 O5



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 271599-21-4 CAPLUS

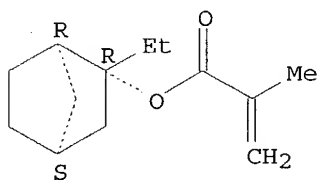
CN 2-Propenoic acid, 2-methyl-, polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-68-6

CMF C13 H20 O2

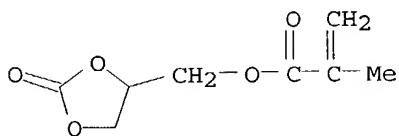
Relative stereochemistry.



CM 2

CRN 13818-44-5

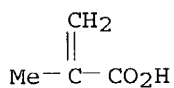
CMF C8 H10 O5



CM 3

CRN 79-41-4

CMF C4 H6 O2



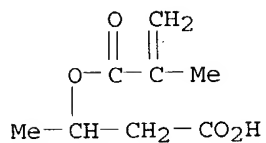
RN 271599-24-7 CAPLUS

CN Butanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with  
rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and  
(2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 271599-23-6

CMF C8 H12 O4

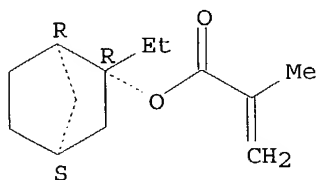


CM 2

CRN 271598-68-6

CMF C13 H20 O2

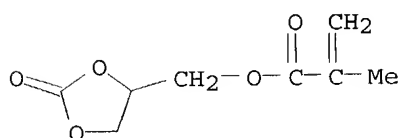
Relative stereochemistry.



CM 3

CRN 13818-44-5

CMF C8 H10 O5



RN 271599-26-9 CAPLUS

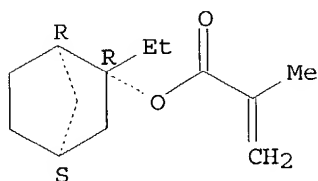
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-68-6

CMF C13 H20 O2

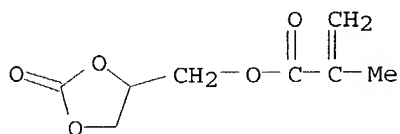
Relative stereochemistry.



CM 2

CRN 13818-44-5

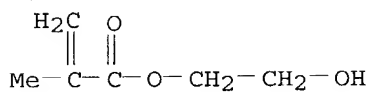
CMF C8 H10 O5



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 271599-28-1 CAPLUS

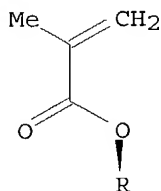
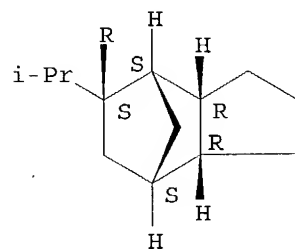
CN 2-Propenoic acid, 2-methyl-, polymer with rel-(3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-66-4

CMF C17 H26 O2

Relative stereochemistry.

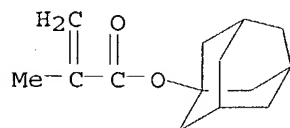




CM 2

CRN 16887-36-8

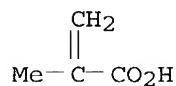
CMF C14 H20 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



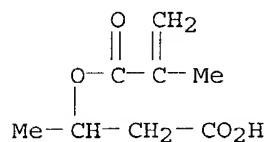
RN 271599-30-5 CAPLUS

CN Butanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with  
rel-(3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-  
yl 2-methyl-2-propenoate and tricyclo[3.3.1.1.3]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271599-23-6

CMF C8 H12 O4



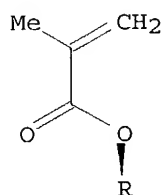
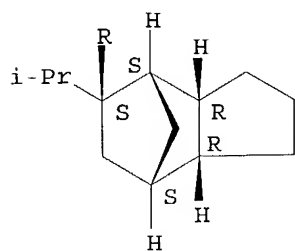
CM 2

CRN 271598-66-4

CMF C17 H26 O2

Relative stereochemistry.

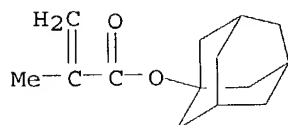
KOROMA EIC1700



CM 3

CRN 16887-36-8

CMF C14 H20 O2



RN 271599-32-7 CAPLUS

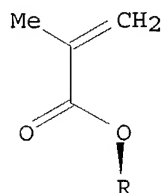
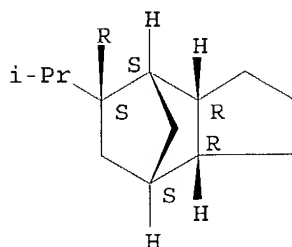
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
rel-(3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-  
yl 2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-66-4

CMF C17 H26 O2

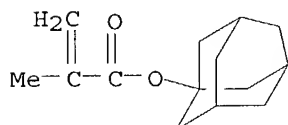
Relative stereochemistry.



CM 2

CRN 16887-36-8

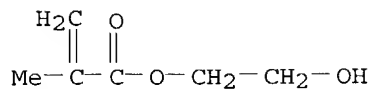
CMF C14 H20 O2



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 271599-33-8 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with rel-(3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

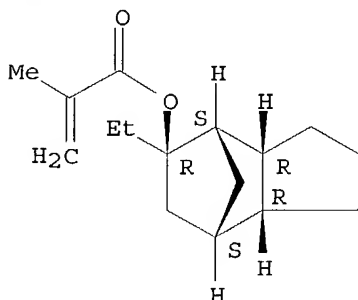
CM 1

KOROMA EIC1700

CRN 271598-65-3

CMF C16 H24 O2

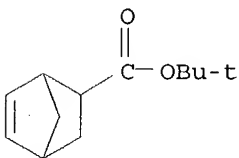
Relative stereochemistry.



CM 2

CRN 154970-45-3

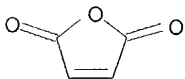
CMF C12 H18 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 271599-34-9 CAPLUS

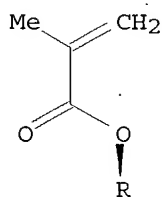
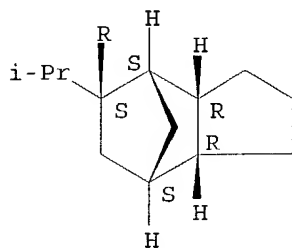
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2,5-furandione and rel-(3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-66-4

CMF C17 H26 O2

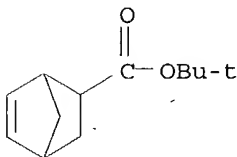
Relative stereochemistry.



CM 2

CRN 154970-45-3

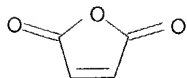
CMF C12 H18 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 271599-35-0 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester,  
polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl

KOROMA EIC1700

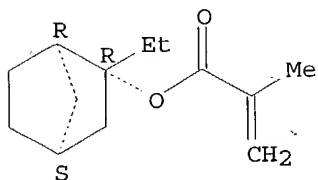
2-methyl-2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 271598-68-6

CMF C13 H20 O2

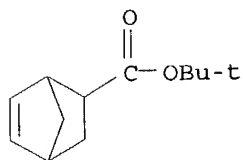
Relative stereochemistry.



CM 2

CRN 154970-45-3

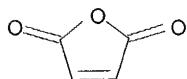
CMF C12 H18 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 271599-36-1 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 2,5-furandione and rel-(1R,2S,4S)-2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

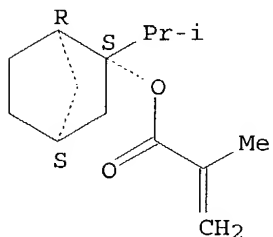
CM 1

CRN 271598-69-7

KOROMA EIC1700

CMF C14 H22 O2

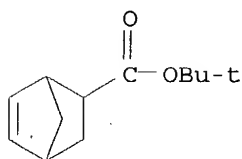
Relative stereochemistry.



CM 2

CRN 154970-45-3

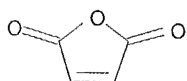
CMF C12 H18 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 271599-37-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

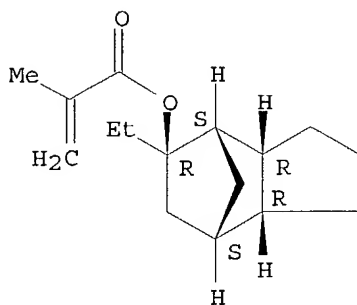
CM 1

CRN 271598-65-3

CMF C16 H24 O2

Relative stereochemistry.

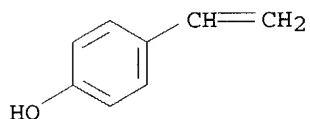
KOROMA EIC1700



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 271599-38-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

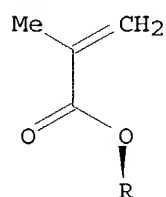
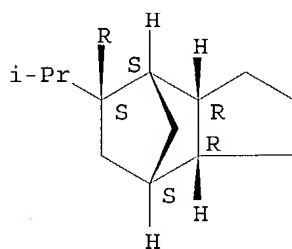
CM 1

CRN 271598-66-4

CMF C17 H26 O2

Relative stereochemistry.

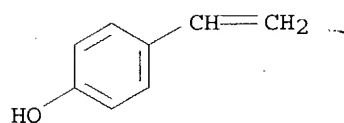




CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 271599-39-4 CAPLUS

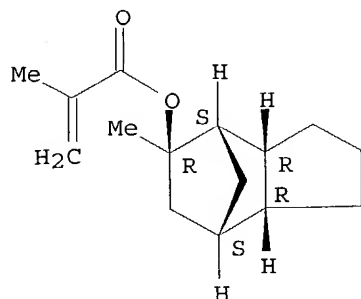
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-octahydro-5-methyl-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-67-5

CMF C15 H22 O2

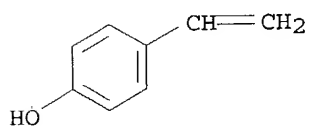
Relative stereochemistry.



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 271599-40-7 CAPLUS

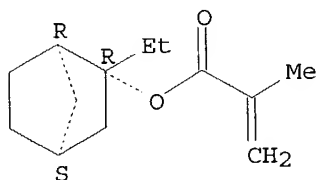
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME).

CM 1

CRN 271598-68-6

CMF C13 H20 O2

Relative stereochemistry.

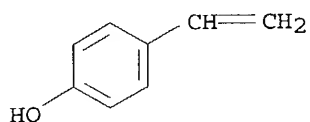


CM 2

CRN 2628-17-3

CMF C8 H8 O

KOROMA EIC1700

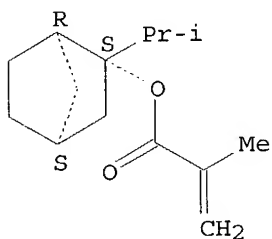


RN 271599-41-8 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, (1R,2S,4S)-2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

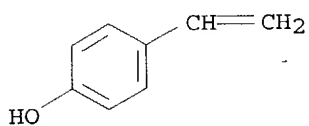
CRN 271598-69-7  
CMF C14 H22 O2

Relative stereochemistry.



CM 2

CRN 2628-17-3  
CMF C8 H8 O

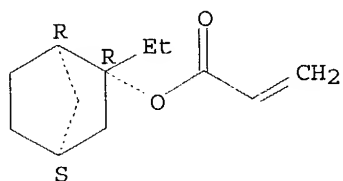


RN 271599-42-9 CAPLUS  
CN 2-Propenoic acid, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-70-0  
CMF C12 H18 O2

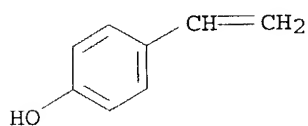
Relative stereochemistry.



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 271599-43-0 CAPLUS

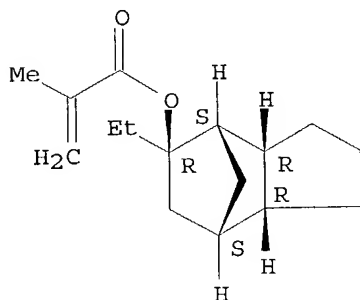
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

Relative stereochemistry.

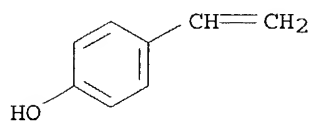


CM 2

CRN 2628-17-3

CMF C8 H8 O

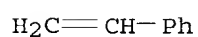
KOROMA EIC1700



CM 3

CRN 100-42-5

CMF C8 H8



RN 271599-44-1 CAPLUS

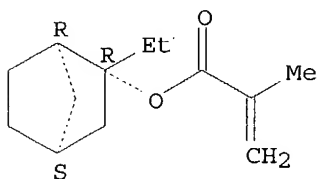
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-68-6

CMF C13 H20 O2

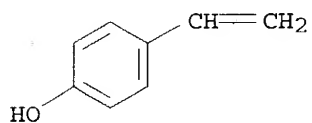
Relative stereochemistry.



CM 2

CRN 2628-17-3

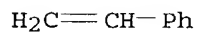
CMF C8 H8 O



CM 3

KOROMA EIC1700

CRN 100-42-5  
CMF C8 H8

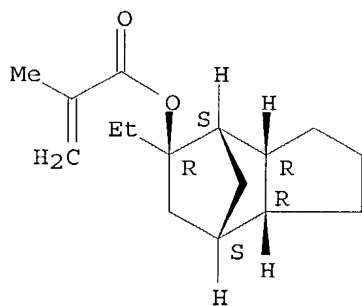


RN 271599-45-2 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

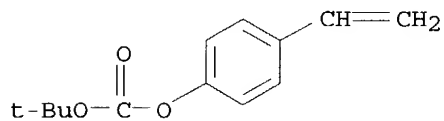
CRN 271598-65-3  
CMF C16 H24 O2

Relative stereochemistry.



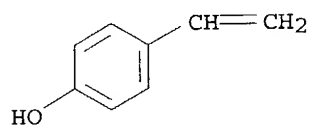
CM 2

CRN 87188-51-0  
CMF C13 H16 O3



CM 3

CRN 2628-17-3  
CMF C8 H8 O



RN 271599-46-3 CAPLUS

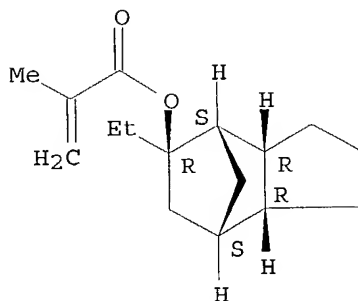
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

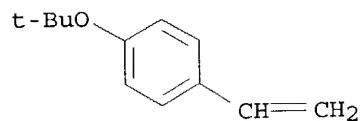
Relative stereochemistry.



CM 2

CRN 95418-58-9

CMF C12 H16 O



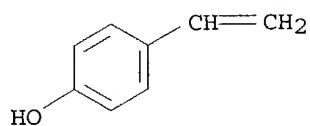
CM 3

CRN 2628-17-3

CMF C8 H8 O







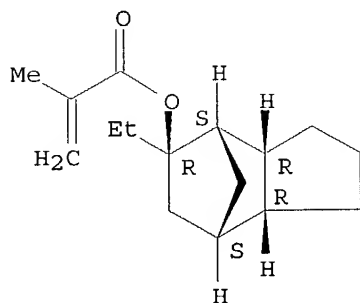
RN 271599-48-5 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

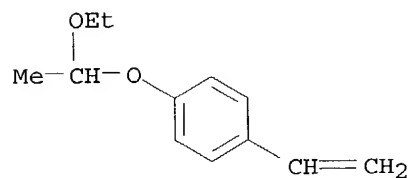
Relative stereochemistry.



CM 2

CRN 157057-20-0

CMF C12 H16 O2

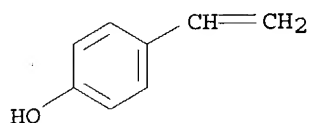


CM 3

CRN 2628-17-3

CMF C8 H8 O

KOROMA EIC1700



RN 271599-49-6 CAPLUS

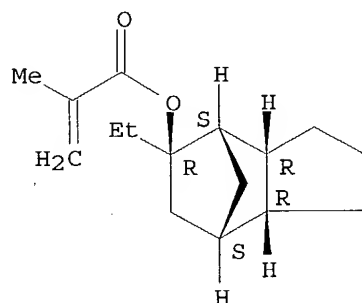
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate, 4-ethenylphenol and 2-(4-ethenylphenoxy)tetrahydro-2H-pyran (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

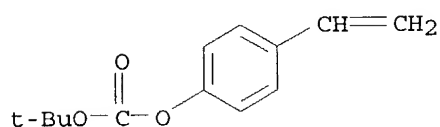
Relative stereochemistry.



CM 2

CRN 87188-51-0

CMF C13 H16 O3

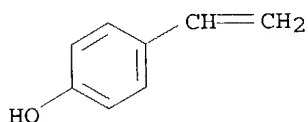


CM 3

CRN 65409-15-6

CMF C13 H16 O2

CMF C8 H8 O



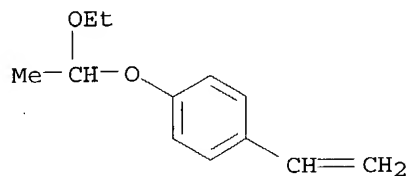
2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate, 1-ethenyl-4-(1-ethoxyethoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CMF C16 H24 O2

The chemical structure shows a cyclohexane ring with a carboxylic acid group (Me-C(=O)-) at position 1, an ethyl group (Et) at position 2, and a methyl group (H<sub>2</sub>C) at position 3. The stereochemistry is indicated by wedges and dashes: the carboxylic acid group is wedged (R), the ethyl group is dashed (S), and the methyl group is wedged (R). The ring carbons are labeled with R and S configurations.

CMF C12 H16 O2

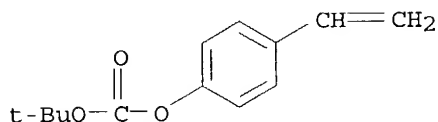
KOROMA EIC1700



CM 3

CRN 87188-51-0

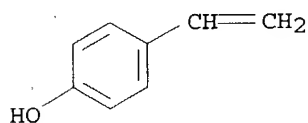
CMF C13 H16 O3



CM 4

CRN 2628-17-3

CMF C8 H8 O



RN 271599-51-0 CAPLUS

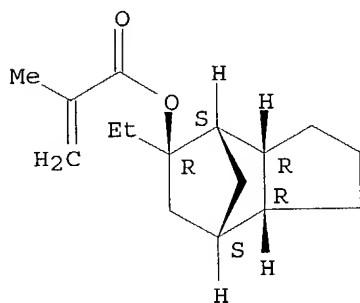
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1-[1-(cyclohexyloxy)ethoxy]-4-ethenylbenzene, 1,1-dimethylethyl 4-ethenylphenyl carbonate and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

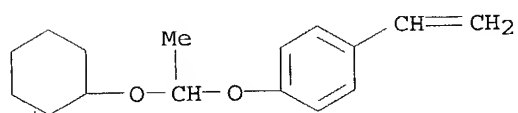
Relative stereochemistry.



CM 2

CRN 190434-67-4

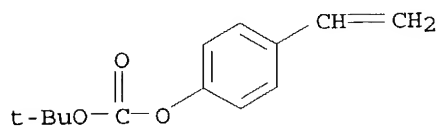
CMF C16 H22 O2



CM 3

CRN 87188-51-0

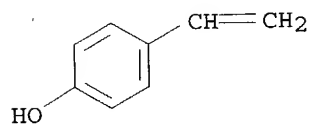
CMF C13 H16 O3



CM 4

CRN 2628-17-3

CMF C8 H8 O



KOROMA EIC1700

RN 271599-52-1 CAPLUS

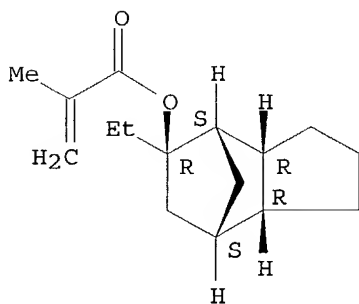
CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 1,1-dimethylethyl 4-ethenylphenyl carbonate, 1-ethenyl-4-(1-ethoxypropoxy)benzene and 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

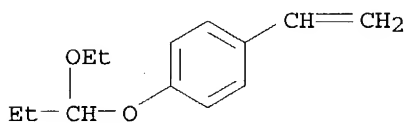
Relative stereochemistry.



CM 2

CRN 192314-49-1

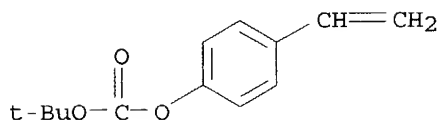
CMF C13 H18 O2



CM 3

CRN 87188-51-0

CMF C13 H16 O3

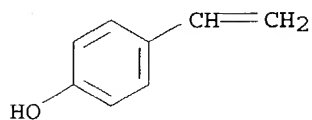


KOROMA EIC1700

CM 4

CRN 2628-17-3

CMF C8 H8 O



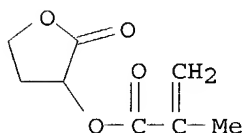
RN 271599-53-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 195000-66-9

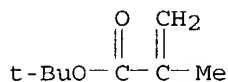
CMF C8 H10 O4



CM 2

CRN 585-07-9

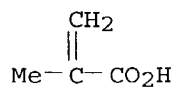
CMF C8 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2

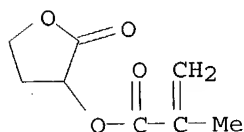


RN 271599-54-3 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
 2-methyl-2-propenoate, tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate  
 and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX  
 NAME)

CM 1

CRN 195000-66-9

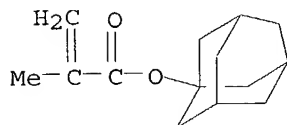
CMF C8 H10 O4



CM 2

CRN 16887-36-8

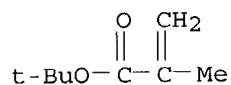
CMF C14 H20 O2



CM 3

CRN 585-07-9

CMF C8 H14 O2

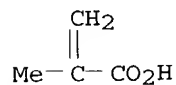


CM 4

KOROMA EIC1700



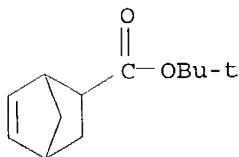
CRN 79-41-4  
CMF C4 H6 O2



RN 271599-55-4 CAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester,  
polymer with 2,5-furandione and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

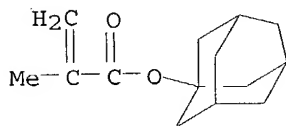
CM 1

CRN 154970-45-3  
CMF C12 H18 O2



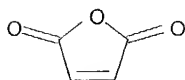
CM 2

CRN 16887-36-8  
CMF C14 H20 O2



CM 3

CRN 108-31-6  
CMF C4 H2 O3



KOROMA EIC1700

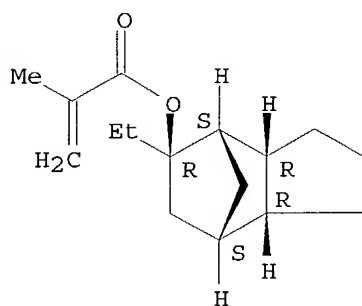
RN 271599-61-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (3aR,4S,5R,7S,7aR)-5-ethyloctahydro-4,7-methano-1H-inden-5-yl ester, rel-, polymer with 2-hydroxyethyl  
 2-methyl-2-propenoate and tetrahydro-5-oxo-2-furanyl 2-methyl-2-propenoate  
 (9CI) (CA INDEX NAME)

CM 1

CRN 271598-65-3

CMF C16 H24 O2

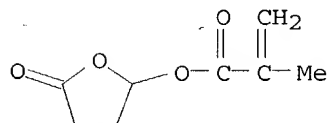
Relative stereochemistry.



CM 2

CRN 142289-41-6

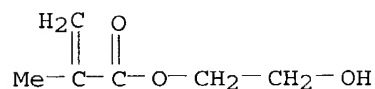
CMF C8 H10 O4



CM 3

CRN 868-77-9

CMF C6 H10 O3



RN 271779-09-0 CAPLUS

KOROMA EIC1700

CN Cyclohexanecarboxylic acid, [(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

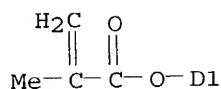
CRN 271779-08-9

CMF C11 H16 O4

CCI IDS



D1-CO<sub>2</sub>H

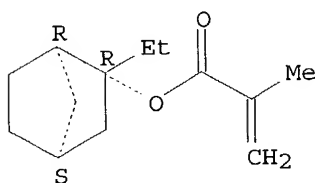


CM 2

CRN 271598-68-6

CMF C13 H20 O2

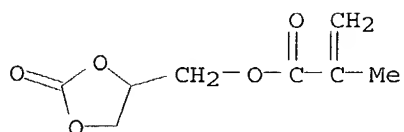
Relative stereochemistry.



CM 3

CRN 13818-44-5

CMF C8 H10 O5

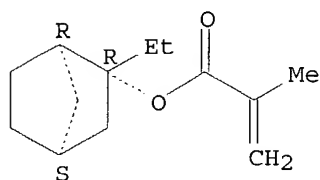


RN 271779-10-3 CAPLUS  
 CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with rel-(1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and (2-oxo-1,3-dioxolan-4-yl)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

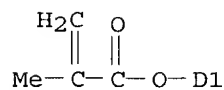
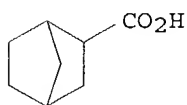
CRN 271598-68-6  
 CMF C13 H20 O2

Relative stereochemistry.



CM 2

CRN 210641-03-5  
 CMF C12 H16 O4  
 CCI IDS

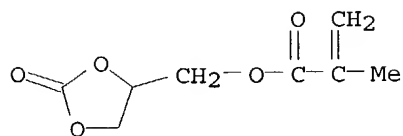


CM 3

CRN 13818-44-5

KOROMA EIC1700

CMF C8 H10 O5



RN 271779-11-4 CAPLUS

CN Cyclohexanecarboxylic acid, [(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with rel-(3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

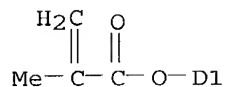
CRN 271779-08-9

CMF C11 H16 O4

CCI IDS



D1-CO<sub>2</sub>H

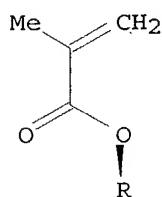
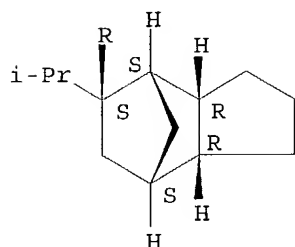


CM 2

CRN 271598-66-4

CMF C17 H26 O2

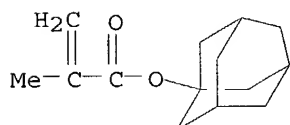
Relative stereochemistry.



CM 3

CRN 16887-36-8

CMF C14 H20 O2



RN 271779-12-5 CAPLUS

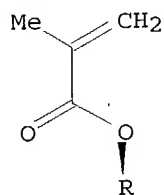
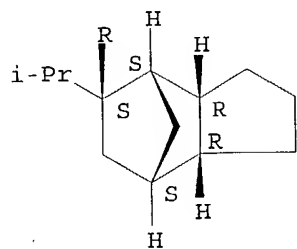
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with rel-(3aR,4S,5S,7S,7aR)-octahydro-5-(1-methylethyl)-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 271598-66-4

CMF C17 H26 O2

Relative stereochemistry.

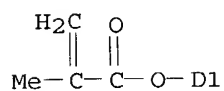
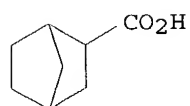


CM 2

CRN 210641-03-5

CMF C12 H16 O4

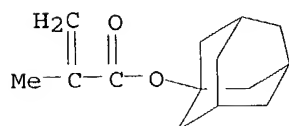
CCI IDS



CM 3

CRN 16887-36-8

CMF C14 H20 O2



KOROMA EIC1700

RN 271779-13-6 CAPLUS

CN Cyclohexanecarboxylic acid, [(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, rel-(1R,2S,4S)-2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

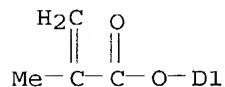
CRN 271779-08-9

CMF C11 H16 O4

CCI IDS



D1-CO<sub>2</sub>H

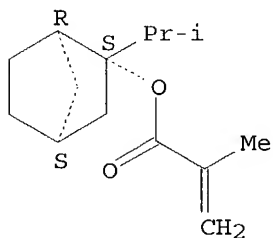


CM 2

CRN 271598-69-7

CMF C14 H22 O2

Relative stereochemistry.



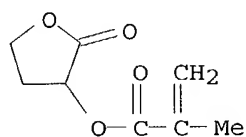
CM 3

CRN 195000-66-9

CMF C8 H10 O4

KOROMA EIC1700

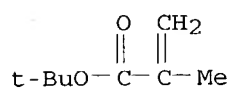




CM 4

CRN 585-07-9

CMF C8 H14 O2



RN 271779-14-7 CAPLUS

CN Cyclohexanecarboxylic acid, [(2-methyl-1-oxo-2-propenyl)oxy]-, polymer  
with rel-(1R,2S,4S)-2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl  
2-methyl-2-propenoate, tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate  
and tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

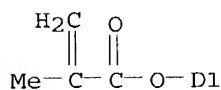
CRN 271779-08-9

CMF C11 H16 O4

CCI IDS



D1-CO<sub>2</sub>H



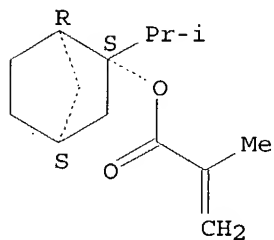
CM 2

CRN 271598-69-7

CMF C14 H22 O2

KOROMA EIC1700

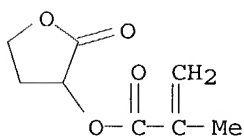
Relative stereochemistry.



CM 3

CRN 195000-66-9

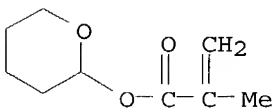
CMF C8 H10 O4



CM 4

CRN 52858-59-0

CMF C9 H14 O3



RN 271779-15-8 CAPLUS

CN Cyclohexanecarboxylic acid, [(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-ethoxyethyl 2-methyl-2-propenoate, rel-(1R,2S,4S)-2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

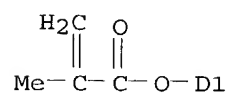
CRN 271779-08-9

CMF C11 H16 O4

CCI IDS



D1- CO<sub>2</sub>H

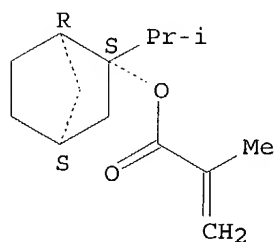


CM 2

CRN 271598-69-7

CMF C14 H22 O2

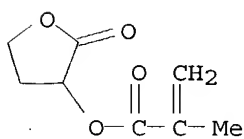
Relative stereochemistry.



CM 3

CRN 195000-66-9

CMF C8 H10 O4

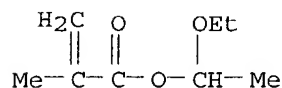


CM 4

CRN 51920-52-6

CMF C8 H14 O3

KOROMA EIC1700



IC ICM C07C069-54  
ICS G03F007-039; C08F020-06

CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 74

ST bicycloheptanyl methacrylate polymer resist

IT Polymerization  
(anionic; ester monomers, polymers, resist compns. and **patterning process**)

IT Polymerization  
(coordination; ester monomers, polymers, resist compns. and **patterning process**)

IT Resists  
(ester monomers, polymers, resist compns. and **patterning process**)

IT Polymerization  
(radical; ester monomers, polymers, resist compns. and **patterning process**)

IT 119183-99-2P 271598-63-1P 271598-64-2P 271598-65-3P 271598-66-4P  
271598-67-5P 271598-68-6P 271598-69-7P 271598-70-0P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(ester monomers, polymers, resist compns. and **patterning process**)

IT 155040-27-0P 177034-75-2P 195154-78-0P 195154-83-7P  
258871-96-4P 271598-71-1P 271598-72-2P  
271598-73-3P 271598-74-4P 271598-75-5P  
271598-76-6P 271598-78-8P 271598-81-3P  
271598-84-6P 271598-86-8P 271598-89-1P  
271598-91-5P 271598-94-8P 271598-97-1P  
271599-00-9P 271599-03-2P 271599-06-5P  
271599-09-8P 271599-11-2P 271599-14-5P  
271599-16-7P 271599-18-9P 271599-21-4P  
271599-24-7P 271599-26-9P 271599-28-1P  
271599-30-5P 271599-32-7P 271599-33-8P  
271599-34-9P 271599-35-0P 271599-36-1P  
271599-37-2P 271599-38-3P 271599-39-4P  
271599-40-7P 271599-41-8P 271599-42-9P  
271599-43-0P 271599-44-1P 271599-45-2P  
271599-46-3P 271599-47-4P 271599-48-5P  
271599-49-6P 271599-50-9P 271599-51-0P  
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271599-55-4P 271599-56-5P 271599-57-6P 271599-59-8P  
271599-60-1P 271599-61-2P 271779-09-0P  
271779-10-3P 271779-11-4P 271779-12-5P  
271779-13-6P 271779-14-7P 271779-15-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material)

use); PREP (Preparation); USES (Uses)  
(ester monomers, polymers, **resist compns.** and  
**patterning process**)

IT 74-96-4, Ethyl bromide 497-38-1, Bicyclo[2.2.1]heptan-2-one 920-46-7  
13380-94-4, Tricyclo[5.2.1.0<sup>2,6</sup>]decan-8-one  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(ester monomers, polymers, **resist compns.** and **patterning  
process**)

L30 ANSWER 49 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:545219 CAPLUS

DOCUMENT NUMBER: 131:206957

TITLE: Light-sensitive resist resin composition for  
semiconductor fabrication and **process** for  
forming **pattern** using same

INVENTOR(S): Ueshima, Koichi; Takayasu, Reiko

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

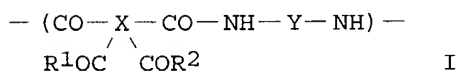
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11231532	A2	19990827	JP 1998-37232	19980219
PRIORITY APPLN. INFO.:			JP 1998-37232	19980219

GI



AB The light sensitive resist resin compn. contains a polyimide precursor  
having repeating unit I (X = 4 valent aliphatics or cyclic aliphatics; R<sup>1</sup>-2  
= hydroxy, monovalent org. group). The resist resin compn. provides the  
excellent I-ray permission, the excellent pattern shape, and the low  
permittivity.

IT 240819-05-0P, Bis(3,4-dicarboxycyclohexyl)dianhydride-bis(4-amino-  
2-trifluoromethylphenyl)-dimethylaminopropyl methacrylate copolymer  
240819-06-1P, Bis(3,4-dicarboxycyclohexyl)dianhydride-bis(4-amino-  
2-trifluoromethylphenyl)-1,3-bis(3-aminopropyl)tetramethyl  
disiloxane-dimethylaminopropyl methacrylate copolymer 240819-07-2P  
, Oxydiphthalic acid dianhydride-o-toluidine-dimethylaminopropyl  
methacrylate copolymer 240819-08-3P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(light-sensitive **resist resin compn.** for  
semiconductor fabrication and **process** for forming

pattern using same)

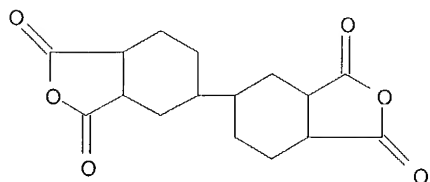
RN 240819-05-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)propyl ester, polymer with 2,2'-bis(trifluoromethyl) [1,1'-biphenyl]-4,4'-diamine and dodecahydro[5,5'-biisobenzofuran]-1,1',3,3'-tetrone (9CI) (CA INDEX NAME)

CM 1

CRN 122640-83-9

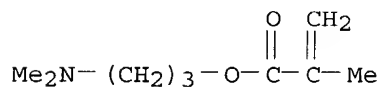
CMF C16 H18 O6



CM 2

CRN 20602-77-1

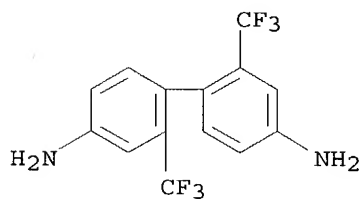
CMF C9 H17 N O2



CM 3

CRN 341-58-2

CMF C14 H10 F6 N2



RN 240819-06-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)propyl ester, polymer with 2,2'-bis(trifluoromethyl) [1,1'-biphenyl]-4,4'-diamine, dodecahydro[5,5'-biisobenzofuran]-1,1',3,3'-tetrone and

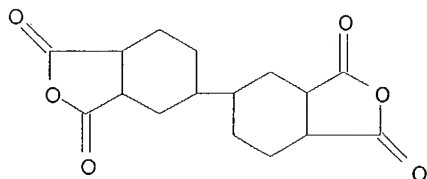
KOROMA EIC1700

3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 122640-83-9

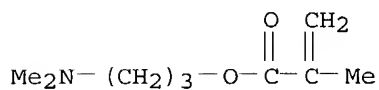
CMF C16 H18 O6



CM 2

CRN 20602-77-1

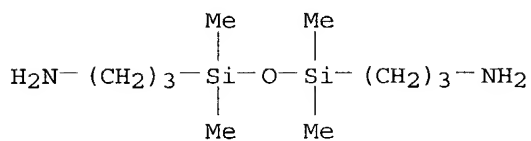
CMF C9 H17 N O2



CM 3

CRN 2469-55-8

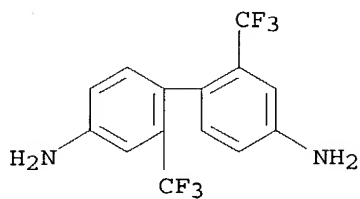
CMF C10 H28 N2 O Si2



CM 4

CRN 341-58-2

CMF C14 H10 F6 N2

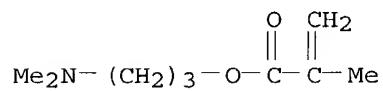


RN 240819-07-2 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)propyl ester, polymer with  
 2-methylbenzenamine and 5,5'-oxybis[1,3-isobenzofurandione] (9CI) (CA  
 INDEX NAME)

CM 1

CRN 20602-77-1

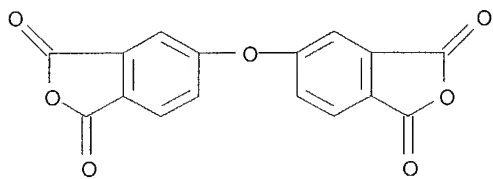
CMF C9 H17 N O2



CM 2

CRN 1823-59-2

CMF C16 H6 O7

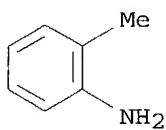


CM 3

CRN 95-53-4

CMF C7 H9 N





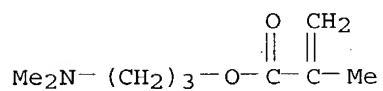
RN 240819-08-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)propyl ester, polymer with 1,4-benzenediamine and [5,5'-biisobenzofuran]-1,1',3,3'-tetrone (9CI) (CA INDEX NAME)

CM 1

CRN 20602-77-1

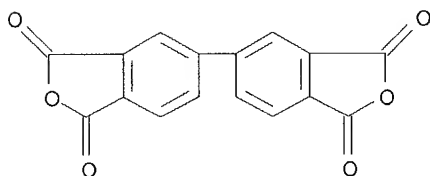
CMF C9 H17 N O2



CM 2

CRN 2420-87-3

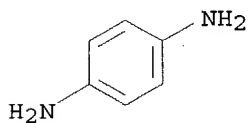
CMF C16 H6 O6



CM 3

CRN 106-50-3

CMF C6 H8 N2



IC ICM G03F007-038

KOROMA EIC1700

ICS C08L079-08; C09D179-08; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 ST resist resin compn semiconductor fabrication  
 IT Photoresists  
 Semiconductor device fabrication  
 (light-sensitive resist resin compn. for semiconductor fabrication and process for forming pattern using same)  
 IT 240819-05-0P, Bis(3,4-dicarboxycyclohexyl)dianhydride-bis(4-amino-2-trifluoromethylphenyl)-dimethylaminopropyl methacrylate copolymer  
 240819-06-1P, Bis(3,4-dicarboxycyclohexyl)dianhydride-bis(4-amino-2-trifluoromethylphenyl)-1,3-bis(3-aminopropyl)tetramethyl  
 disiloxane-dimethylaminopropyl methacrylate copolymer 240819-07-2P  
 , Oxydiphthalic acid dianhydride-o-toluidine-dimethylaminopropyl methacrylate copolymer 240819-08-3P  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (light-sensitive resist resin compn. for semiconductor fabrication and process for forming pattern using same)

L30 ANSWER 50 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1999:238782 CAPLUS  
 DOCUMENT NUMBER: 130:318601  
 TITLE: Photosensitive resin composition, pattern formation using same, and manufacture of electronic device  
 INVENTOR(S): Maegawa, Yasunari; Mitsuwa, Takao; Ueno, Takumi; Okabe, Yoshiaki  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11102065	A2	19990413	JP 1997-263278	19970929

PRIORITY APPLN. INFO.: JP 1997-263278 19970929

AB A radiation-sensitive resin compn. contains (a) a carboxyl polymer having an alicyclic hydrocarbon structure, (b) a radiation-sensitive acid-generator, and (c) a compd. R1NHC(:A1)NHR2 (I; A1 = the group VI atom; R1, R2 = C3-50 org. group, .gtoreq.1 of the groups has OH group protected with a group which can be released by the action of acid and/or CO2H group) and/or a compd. R3N:C(NH2)A2R4 (II; A2 = O, S, N; R3, R4 = C3-40 org. group, .gtoreq.1 of the groups has OH group protected with a group which can be released by the action of acid and/or CO2H group). The compn. may contain (1) (a) and a radiation-sensitive compd. R5NHC(:A3)NHR6 (III; A3 = the group VI atom; R5, R6 = C3-50 org. group) and/or a radiation-sensitive compd. R7N:C(NH2)A4R8 (IV; A4 = O, S, N; R7, R8 = C3-

40 org. group), (2) (b), I and/or II, and (d) a carboxyl polymer having an alicyclic hydrocarbon structure and org. groups which can be hydrolyzed with alk. developing solns. or (3) III and/or IV and (d). The compn. is coated on a substrate, irradiated through a photomask with an electromagnetic wave, and developed with an alk. developing soln. to form a pattern. A method. of manufg. an electronic device is also claimed, comprising the above **patterning process**. The compn. shows high transparency to far UV regions including ArF excimer lasers of wavelength 193 nm and improved dry etch resistance and developability.

IT 181531-12-4P, Methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 186585-88-6P, tert-Butyl methacrylate-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 223525-00-6P, tert-Butyl 5-norbornene-2-carboxylate-5-norbornene-2-carboxylic acid-cyanomethyl methacrylate copolymer 223525-03-9P, Cyanomethyl methacrylate-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 223525-06-2P, Cyanomethyl methacrylate-5-Norbornene-2-carboxylic acid copolymer  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoresists compn. contg. urea compd. and carboxyl polymer having alicyclic group)

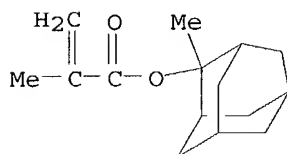
RN 181531-12-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

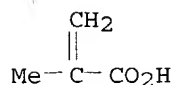
CMF C15 H22 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



RN 186585-88-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl

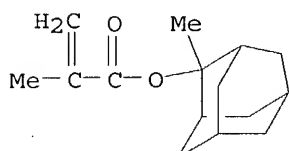
KOROMA EIC1700

2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

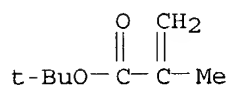
CMF C15 H22 O2



CM 2

CRN 585-07-9

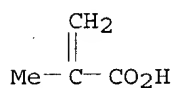
CMF C8 H14 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



RN 223525-00-6 CAPLUS

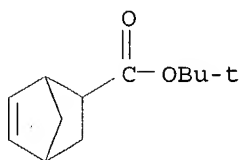
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with cyanomethyl  
2-methyl-2-propenoate and 1,1-dimethylethyl bicyclo[2.2.1]hept-5-ene-2-  
carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 154970-45-3

CMF C12 H18 O2

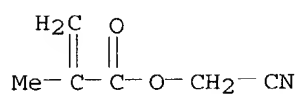
KOROMA EIC1700



CM 2

CRN 7726-87-6

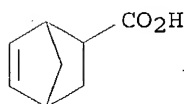
CMF C6 H7 N O2



CM 3

CRN 120-74-1

CMF C8 H10 O2



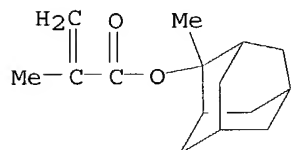
RN 223525-03-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with cyanomethyl 2-methyl-2-propenoate and 2-methyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 177080-67-0

CMF C15 H22 O2

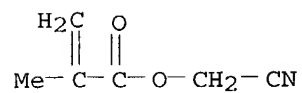


KOROMA EIC1700

CM 2

CRN 7726-87-6

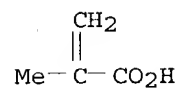
CMF C6 H7 N O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



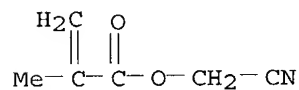
RN 223525-06-2 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with cyanomethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 7726-87-6

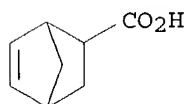
CMF C6 H7 N O2



CM 2

CRN 120-74-1

CMF C8 H10 O2



IC ICM G03F007-004

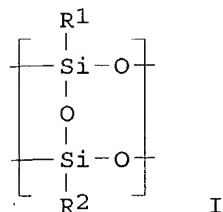
KOROMA EIC1700

ICS G03F007-004; G03F007-039; H01L021-027; H01L021-312  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38, 76  
ST photoresist urea compd; carboxy polymer alicyclic group photoresist; acid  
generator photoresist  
IT Photoresists  
(photoresists compn. contg. urea compd. and carboxyl polymer having  
alicyclic group)  
IT 60288-40-6, Trimethylsulfonium triflate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid generator; photoresists compn. contg. urea compd. and carboxyl  
polymer having alicyclic group)  
IT 28551-72-6P, 2-Norbornene-5-carboxylic acid-maleic anhydride copolymer  
181531-12-4P, Methacrylic acid-2-methyl-2-adamantyl methacrylate  
copolymer 186585-88-6P, tert-Butyl methacrylate-methacrylic  
acid-2-methyl-2-adamantyl methacrylate copolymer 210686-57-0P  
211565-45-6P, tert-Butyl 5-norbornene-2-carboxylate-5-norbornene-2-  
carboxylic acid-maleic anhydride copolymer 223524-93-4P 223524-95-6P  
223524-98-9P 223525-00-6P, tert-Butyl 5-norbornene-2-carboxylate-  
5-norbornene-2-carboxylic acid-cyanomethyl methacrylate copolymer  
223525-03-9P, Cyanomethyl methacrylate-methacrylic  
acid-2-methyl-2-adamantyl methacrylate copolymer 223525-06-2P,  
Cyanomethyl methacrylate-5-Norbornene-2-carboxylic acid copolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(photoresists compn. contg. urea compd. and  
carboxyl polymer having alicyclic group)  
IT 223525-09-5P 223525-12-0P, 2-tert-Butoxycarbonylamino-4,6-  
dihydroxypyrimidine  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn. of urea compd.)  
IT 2556-36-7, 1,4-Cyclohexane diisocyanate 3173-53-3, Cyclohexyl isocyanate  
3770-97-6 6456-74-2 6850-65-3, 4-Aminocyclohexanol 24424-99-5,  
Di-tert-butyl dicarbonate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of urea compd.)

L30 ANSWER 51 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1999:140025 CAPLUS  
DOCUMENT NUMBER: 130:189408  
TITLE: Resist resin, resist resin composition, and  
process for patterning therewith  
INVENTOR(S): Namba, Yoichi; Takahashi, Hiroshi  
PATENT ASSIGNEE(S): Showa Denko K.K., Japan  
SOURCE: PCT Int. Appl., 70 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9909457	A1	19990225	WO 1998-JP3589	19980812
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1004936	A1	20000531	EP 1998-937790	19980812
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6303268	B1	20011016	US 2000-485532	20000214
PRIORITY APPLN. INFO.:			JP 1997-219540	A 19970814
			JP 1998-37554	A 19980219
			US 1998-77683P	P 19980312
			US 1998-77685P	P 19980312
			WO 1998-JP3589	W 19980812

GI



AB A resist resin contg. a copolymer having a (meth)acrylic structure having a side chain group decomposable with an acid and a polyorganosilsequioxane structure of general formula I in the same mol., or a mixt. of polymers having these structures in different mols., and a **process** for **patterning** with the resist resin wherein the symbols are as defined in the description. This resist resin has a high sensitivity to a radiation having a short wavelength of 220 nm or below and is capable of forming a fine pattern of the order of 0.15 .mu.m or below.

IT **72145-62-1P**, -tert-Butyl methacrylate-methacrylic acid-methyl methacrylate copolymer **138177-31-8P**, Butyl methacrylate-methacrylic acid graft copolymer **184295-59-8P**, Methacrylic acid-methyl methacrylate-tetrahydropyranyl methacrylate copolymer **220611-15-4DP**, tri-Me siloxy terminated **220611-15-4P**, 3-Methacryloxypropyltriethoxysilane-methyltriethoxysilane copolymer **220611-16-5DP**, trimethylsiloxy terminated **220611-16-5P**, tert-Butyl methacrylate-methacrylic acid-.gamma.-methacryloxypropyltriethoxysilane-methyltriethoxysilane graft polymer **220611-21-2P 220611-23-4P 220611-24-5P**  
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(resist resin, resist resin compn., and  
**process for patterning** therewith)

RN 72145-62-1 CAPLUS

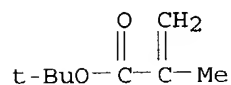


CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 585-07-9

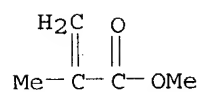
CMF C8 H14 O2



CM 2

CRN 80-62-6

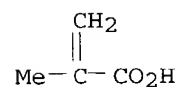
CMF C5 H8 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



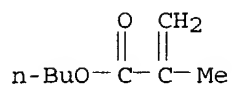
RN 138177-31-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate,  
graft (9CI) (CA INDEX NAME)

CM 1

CRN 97-88-1

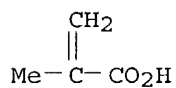
CMF C8 H14 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



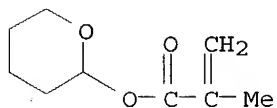
RN 184295-59-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate and tetrahydro-2H-pyran-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 52858-59-0

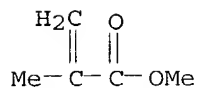
CMF C9 H14 O3



CM 2

CRN 80-62-6

CMF C5 H8 O2

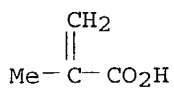


CM 3

CRN 79-41-4

CMF C4 H6 O2

KOROMA EIC1700



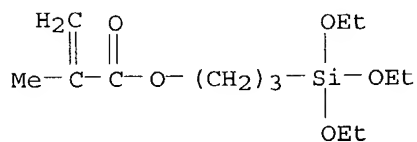
RN 220611-15-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl)propyl ester, polymer with triethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

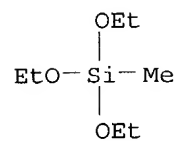
CMF C13 H26 O5 Si



CM 2

CRN 2031-67-6

CMF C7 H18 O3 Si



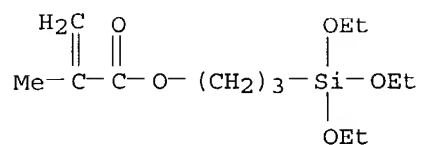
RN 220611-15-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl)propyl ester, polymer with triethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

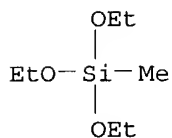
CMF C13 H26 O5 Si



CM 2

CRN 2031-67-6

CMF C7 H18 O3 Si



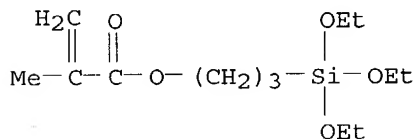
RN 220611-16-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate, triethoxymethylsilane and 3-(triethoxysilyl)propyl  
2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

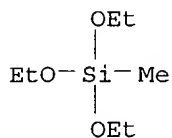
CMF C13 H26 O5 Si



CM 2

CRN 2031-67-6

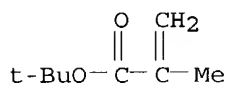
CMF C7 H18 O3 Si



CM 3

CRN 585-07-9

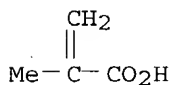
CMF C8 H14 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



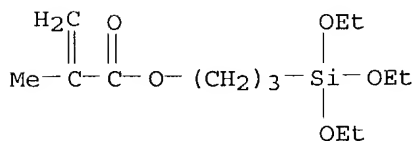
RN 220611-16-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate, triethoxymethylsilane and 3-(triethoxysilyl)propyl  
2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

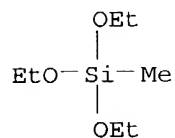
CMF C13 H26 O5 Si



CM 2

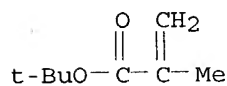
KOROMA EIC1700

CRN 2031-67-6  
CMF C7 H18 O3 Si



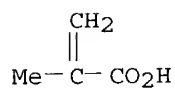
CM 3

CRN 585-07-9  
CMF C8 H14 O2



CM 4

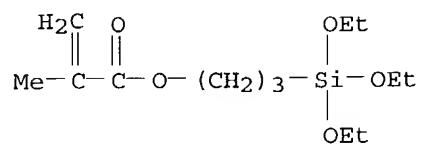
CRN 79-41-4  
CMF C4 H6 O2



RN 220611-21-2 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, 1,1-dimethylethyl 2-methyl-2-propenoate, triethoxymethylsilane and 3-(triethoxysilyl)propyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

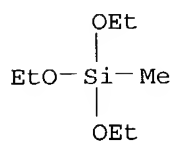
CRN 21142-29-0  
CMF C13 H26 O5 Si



CM 2

CRN 2031-67-6

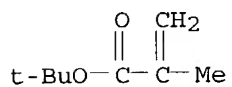
CMF C7 H18 O3 Si



CM 3

CRN 585-07-9

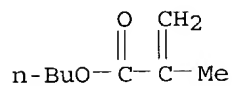
CMF C8 H14 O2



CM 4

CRN 97-88-1

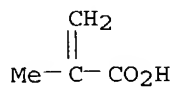
CMF C8 H14 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



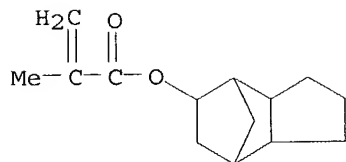
RN 220611-23-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,1-dimethylethyl  
2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl  
2-methyl-2-propenoate, triethoxymethylsilane and 3-(triethoxysilyl)propyl  
2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 34759-34-7

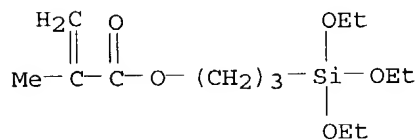
CMF C14 H20 O2



CM 2

CRN 21142-29-0

CMF C13 H26 O5 Si

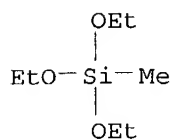


CM 3

CRN 2031-67-6

CMF C7 H18 O3 Si

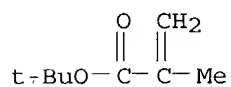




CM 4

CRN 585-07-9

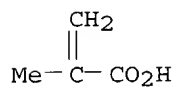
CMF C8 H14 O2



CM 5

CRN 79-41-4

CMF C4 H6 O2



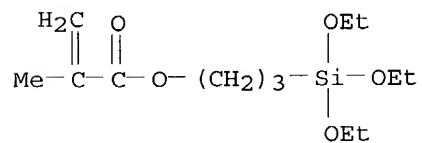
RN 220611-24-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(triethoxysilyl)propyl ester, polymer with 3-(trichlorosilyl)propanenitrile, hydrolytic (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

CMF C13 H26 O5 Si



CM 2

KOROMA EIC1700

CRN 7732-18-5  
CMF H2 O

H2O

CM 3

CRN 1071-22-3  
CMF C3 H4 Cl3 N Si

Cl<sub>3</sub>Si-CH<sub>2</sub>-CH<sub>2</sub>-CN

- IC ICM G03F007-075  
ICS C08L033-04; C08G077-442; C08L083-10
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35
- ST resist resin compn patterning silsesquioxane acrylic methacrylic
- IT Silsesquioxanes  
RL: PNU (Preparation, unclassified); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(polyorgano; resist resin, resist resin compn., and **process** for **patterning** therewith)
- IT Photoresists  
(resist resin, resist resin compn., and **process** for **patterning** therewith)
- IT Acrylic polymers, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(resist resin, resist resin compn., and **process** for **patterning** therewith)
- IT 72145-62-1P, -tert-Butyl methacrylate-methacrylic acid-methyl methacrylate copolymer 138177-31-8P, Butyl methacrylate-methacrylic acid graft copolymer 184295-59-8P, Methacrylic acid-methyl methacrylate-tetrahydropyranyl methacrylate copolymer 220611-15-4DP, tri-Me siloxy terminated 220611-15-4P, 3-Methacryloxypropyltriethoxysilane-methyltriethoxysilane copolymer 220611-16-5DP, trimethylsiloxy terminated 220611-16-5P, tert-Butyl methacrylate-methacrylic acid-.gamma.-methacryloxypropyltriethoxysilane-methyltriethoxysilane graft polymer 220611-18-7DP, Methyltriethoxysilane-propyltriethoxysilane copolymer, hydroxy or propoxy terminated 220611-21-2P 220611-23-4P 220611-24-5P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(**resist** resin, **resist** resin compn., and

**process for patterning therewith)**

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 52 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1998:407889 CAPLUS  
 DOCUMENT NUMBER: 129:154699  
 TITLE: Chemically amplified photoresist composition and patterning using it  
 INVENTOR(S): Maeda, Katsumi; Iwasa, Shigeyuki; Nakano, Kaichiro; Hasegawa, Etsuo  
 PATENT ASSIGNEE(S): NEC Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10171122	A2	19980626	JP 1996-335603	19961216
JP 2943740	B2	19990830		

PRIORITY APPLN. INFO.: JP 1996-335603 19961216

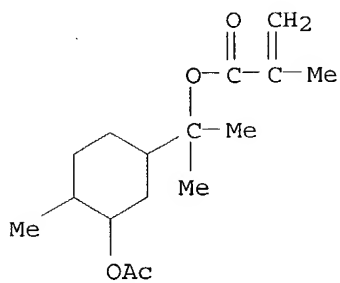
AB In the title compn. contg. a resin in which the acid-decomposable groups are decompd. by the action of acid to increase the soly. in aq. alk. solns. and a photoacid-generating agent, the acid- decomposable group has the general formula CMe2R1OR2 (R1 = C6-10 divalent hydrocarbon having cyclic hydrocarbon groups; R2 = H, C1-4 alkyl, acyl). The compn. is applied on a substrate to be **processed**, pre-baked, **patternwise** exposed with light of wavelength 180-220 nm, post-baked, and developed to form a resist pattern. The compn. shows high transparency, dry-etching resistance, adhesion to substrates, resoln., and developability.

IT 210573-85-6P 210573-87-8P 210715-09-6P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (patterning of chem. amplified **photoresist compn.** with UV)

RN 210573-85-6 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 1-[3-(acetyloxy)-4-methylcyclohexyl]-1-methylethyl 2-methyl-2-propenoate and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

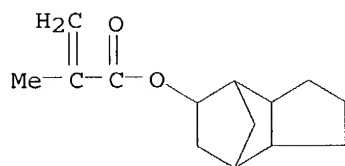
CRN 210573-84-5  
 CMF C16 H26 O4



CM 2

CRN 34759-34-7

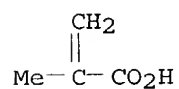
CMF C14 H20 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



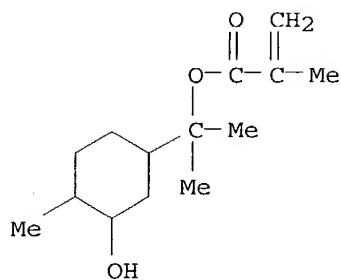
RN 210573-87-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1-(3-hydroxy-4-methylcyclohexyl)-1-methylethyl 2-methyl-2-propenoate and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 210573-86-7

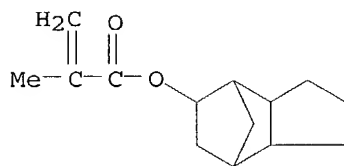
CMF C14 H24 O3



CM 2

CRN 34759-34-7

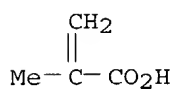
CMF C14 H20 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



RN 210715-09-6 CAPLUS

CM 4,7-Methano-1H-indenecarboxylic acid, octahydro-2(or 5)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with 1-[3-(acetyloxy)-4-methylcyclohexyl]-1-methylethyl octahydro-2(or 5)-[(2-methyl-1-oxo-2-propenyl)oxy]-4,7-methano-1H-indenecarboxylate and octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

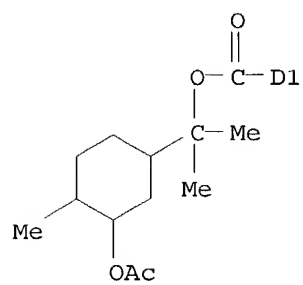
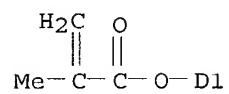
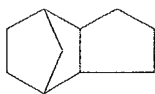
CM 1

CRN 210640-75-8

CMF C27 H40 O6

CCI IDS

KOROMA EIC1700

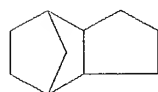


CM 2

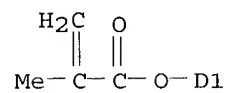
CRN 210640-74-7

CMF C15 H20 O4

CCI IDS



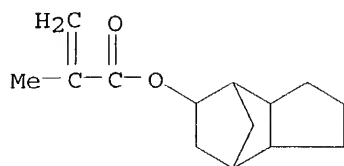
D1-CO<sub>2</sub>H



CM 3

CRN 34759-34-7

CMF C14 H20 O2



- IC ICM G03F007-039  
ICS G03F007-30; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST chem amplification photoresist acid decomposable group; cycloalkyl ester acrylate polymer resist UV
- IT Photoresists  
(UV; patterning of chem. amplified photoresist compn. with UV)
- IT 210573-91-4P, 2-Methoxy-8-acetoxyp-menthane  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(deacetylation of; patterning of chem. amplified photoresist compn. with UV)
- IT 210573-90-3P, 2-Hydroxy-8-acetoxyp-menthane  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(methylation of; patterning of chem. amplified photoresist compn. with UV)
- IT 184856-56-2P 195398-48-2P 210573-88-9P, 2-Acetoxy-p-menthan-8-ol  
210573-89-0P, 2-Methoxy-p-menthan-8-ol 210715-12-1P  
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(patterning of chem. amplified photoresist compn. with UV)
- IT 210573-84-5P 210573-85-6P 210573-86-7P 210573-87-8P  
210640-76-9P 210640-85-0P 210640-88-3P 210641-03-5P 210641-20-6P  
210715-08-5P 210715-09-6P 210715-10-9P 210715-11-0P  
210715-13-2P 210715-14-3P 210715-15-4P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(patterning of chem. amplified photoresist compn. with UV)
- IT 120-74-1P  
RL: PNU (Preparation, unclassified); PREP (Preparation)  
(patterning of chem. amplified photoresist compn. with UV)
- IT 173161-66-5P 195398-50-6P 195891-99-7P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(patterning of chem. amplified photoresist compn. with UV)
- IT 80-26-2 814-68-6, Acryloyl chloride 920-46-7, Methacryloyl chloride  
28132-01-6, Tricyclo[5.2.1.0<sup>2,6</sup>]decane-4,8-dimethanol 38049-26-2,  
Dihydrocarveol 58506-23-3, 2,8-Dihydroxy-p-menthane 195057-79-5,  
8-tert-Butoxycarbonyltetracyclo[4.4.0.1<sup>2,5</sup>.1<sup>7,10</sup>]-3-dodecene  
RL: RCT (Reactant); RACT (Reactant or reagent)

(patterning of chem. amplified photoresist compn. with UV)

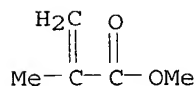
L30 ANSWER 53 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1997:233587 CAPLUS  
 DOCUMENT NUMBER: 126:218591  
 TITLE: Resist compositions containing phenolic resins and  
 acrylic resins and resist pattern formation  
 INVENTOR(S): Nozaki, Koji  
 PATENT ASSIGNEE(S): Fujitsu Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09015862	A2	19970117	JP 1995-160882	19950627
JP 3347530	B2	20021120		

PRIORITY APPLN. INFO.: JP 1995-160882 19950627  
 AB Claimed resist compns. comprise (a) alkali-sol. mixts. contg. film-forming resins having phenol structure and (meth)acrylate polymers having dissolving rate to 2.38% tetramethylammonium hydroxide aq. solns. 100-2000 .ANG./s and (b) compds. preventing dissoln. of the resist compns. to alkali solns. and decomposable by irradiation to solubilize the compns. Claimed **patterning process** comprises following steps; coating the resist compns., selective irradiation, and development by alkali aq. solns. The resist compns. have good environmental stability and swelling prevention while patterning.  
 IT 25086-15-1, Methacrylic acid-methyl methacrylate copolymer 174640-96-1, Cyclohexyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid copolymer 188023-55-4 188023-56-5 188023-57-6, Cyclohexyl methacrylate-methacrylic acid-methacrylonitrile copolymer 188023-58-7  
 RL: TEM (Technical or engineered material use); USES (Uses) (resist compns. contg. phenolic resins and acrylic resins and resist pattern formation)  
 RN 25086-15-1 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6  
 CMF C5 H8 O2

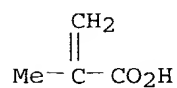




CM 2

CRN 79-41-4

CMF C4 H6 O2



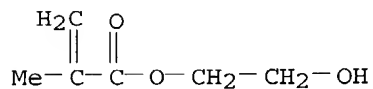
RN 174640-96-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with cyclohexyl 2-methyl-2-propenoate and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9

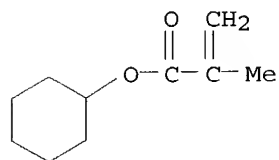
CMF C6 H10 O3



CM 2

CRN 101-43-9

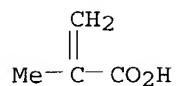
CMF C10 H16 O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



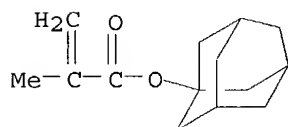
RN 188023-55-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 16887-36-8

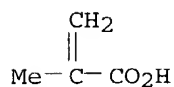
CMF C14 H20 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



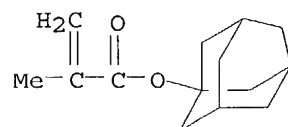
RN 188023-56-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-hydroxyethyl  
2-methyl-2-propenoate and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 16887-36-8

CMF C14 H20 O2

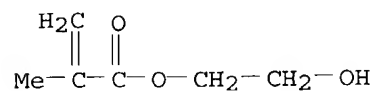


KOROMA EIC1700

CM 2

CRN 868-77-9

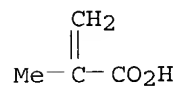
CMF C6 H10 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



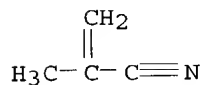
RN 188023-57-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with cyclohexyl 2-methyl-2-propenoate and 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 126-98-7

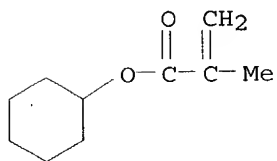
CMF C4 H5 N



CM 2

CRN 101-43-9

CMF C10 H16 O2

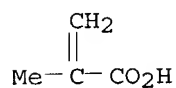


KOROMA EIC1700

CM 3

CRN 79-41-4

CMF C4 H6 O2



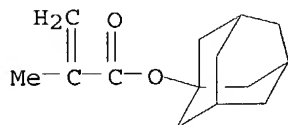
RN 188023-58-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-methyl-2-propenenitrile and tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 16887-36-8

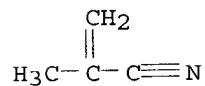
CMF C14 H20 O2



CM 2

CRN 126-98-7

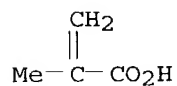
CMF C4 H5 N



CM 3

CRN 79-41-4

CMF C4 H6 O2

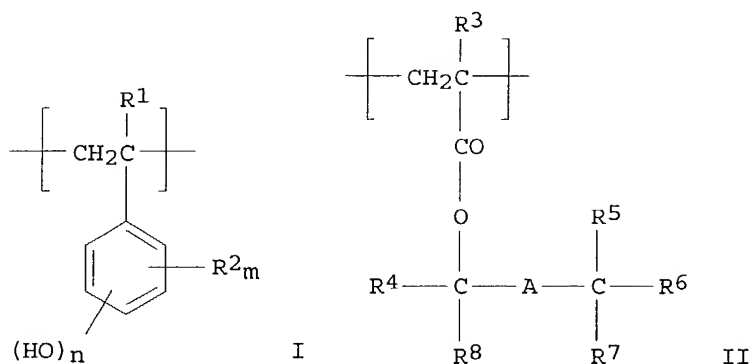


IC ICM G03F007-039  
ICS G03F007-004; G03F007-023; G03F007-033; G03F007-30; H01L021-027;  
H01L021-312  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
ST resist phenolic resin acrylate patterning  
IT Phenolic resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(novolak, cresol-based; resist compns. contg. phenolic resins and  
acrylic resins and resist pattern formation)  
IT Photoresists  
(resist compns. contg. phenolic resins and acrylic resins and resist  
pattern formation)  
IT 75-59-2, Tetramethylammonium hydroxide  
RL: NUU (Other use, unclassified); USES (Uses)  
(developer; resist compns. contg. phenolic resins and acrylic resins  
and resist pattern formation)  
IT 107761-81-9 188023-60-1, Methacrylic acid-methacrylonitrile-norbornyl  
methacrylate copolymer 188070-27-1  
RL: MOA (Modifier or additive use); USES (Uses)  
(dissoln. inhibitor; resist compns. contg. phenolic resins and acrylic  
resins and resist pattern formation)  
IT 124760-77-6 188070-28-2  
RL: MOA (Modifier or additive use); USES (Uses)  
(resist compns. contg. phenolic resins and acrylic resins and resist  
pattern formation)  
IT 25086-15-1, Methacrylic acid-methyl methacrylate copolymer  
59269-51-1, Polyvinylphenol 154116-68-4, Methacrylic acid-norbornyl  
methacrylate copolymer 174640-96-1, Cyclohexyl  
methacrylate-2-hydroxyethyl methacrylate-methacrylic acid copolymer  
188023-55-4 188023-56-5 188023-57-6,  
Cyclohexyl methacrylate-methacrylic acid-methacrylonitrile copolymer  
188023-58-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(resist compns. contg. phenolic resins and acrylic  
resins and resist pattern formation)

L30 ANSWER 54 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1996:449240 CAPLUS  
DOCUMENT NUMBER: 125:100186  
TITLE: Radiation-sensitive resin composition using novel  
copolymer  
INVENTOR(S): Yamachika, Mikio; Oota, Toshuki; Tsuji, Akira  
PATENT ASSIGNEE(S): Japan Synthetic Rubber Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08101507	A2	19960416	JP 1994-259756	19940930
PRIORITY APPLN. INFO.:			JP 1994-259756	19940930
GI				



AB The title resin compn. contains a radiation-sensitive acid-generating agent and a copolymer having repeating units I and II (R1, R3 = H, Me; R2 = H, alkyl, alkoxy, aryl(oxy), aralkyl; R4-8 = H, alkyl, alkoxy, alkylthio, aryl(oxy), aralkyl(oxy); R7 and R8 may link each other; A = O, S; n = integer of .gtoreq.1; m = integer of .gtoreq.0; n + m .ltoreq.5). The compn. useful as a pos.-working resist shows good sensitivity, developability, and **processability** and provides high-resoln. **patterns** with good profile, and is suited for manufg. elec. app. Thus, a resist comprised p-isopropenylphenol-1-ethoxyethyl acrylate (47:53) copolymer and N-(trifluoromethylsulfonyloxy)bicyclo-[2,2,1]-hepto-5-ene-2,3-dicarboxyimide.

IT 178953-87-2P, p-Isopropenylphenol-1-ethoxyethyl acrylate copolymer  
 178953-88-3P, p-Vinylphenol-1-ethoxyethyl acrylate copolymer  
 178953-89-4P 178953-90-7P 178953-91-8P  
 178953-92-9P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (radiation-sensitive **resist resin compn.**)

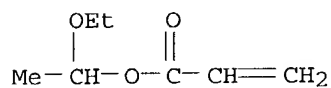
RN 178953-87-2 CAPLUS

CN 2-Propenoic acid, 1-ethoxyethyl ester, polymer with 4-(1-methylethenyl)phenol (9CI) (CA INDEX NAME)

CM 1

CRN 52351-91-4

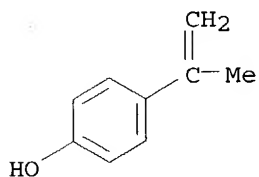
CMF C7 H12 O3



CM 2

CRN 4286-23-1

CMF C9 H10 O



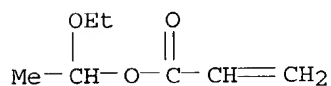
RN 178953-88-3 CAPLUS

CN 2-Propenoic acid, 1-ethoxyethyl ester, polymer with 4-ethenylphenol (9CI)  
(CA INDEX NAME)

CM 1

CRN 52351-91-4

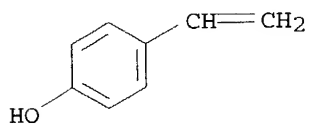
CMF C7 H12 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



RN 178953-89-4 CAPLUS

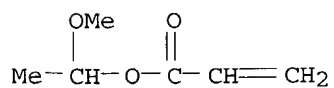
CN 2-Propenoic acid, 1-methoxyethyl ester, polymer with 4-(1-methylethenyl)phenol (9CI) (CA INDEX NAME)

KOROMA EIC1700

CM 1

CRN 89599-35-9

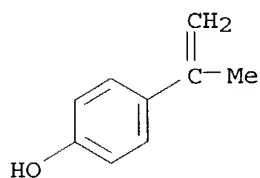
CMF C6 H10 O3



CM 2

CRN 4286-23-1

CMF C9 H10 O



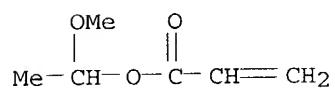
RN 178953-90-7 CAPLUS

CN 2-Propenoic acid, 1-methoxyethyl ester, polymer with 4-ethenylphenol (9CI)  
(CA INDEX NAME)

CM 1

CRN 89599-35-9

CMF C6 H10 O3

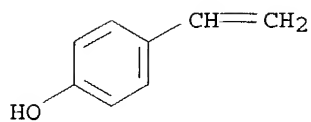


CM 2

CRN 2628-17-3

CMF C8 H8 O



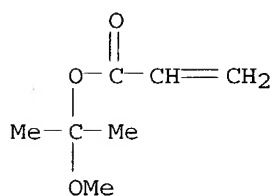


RN 178953-91-8 CAPLUS  
 CN 2-Propenoic acid, 1-methoxy-1-methylethyl ester, polymer with  
 4-(1-methylethenyl)phenol (9CI) (CA INDEX NAME)

CM 1

CRN 178824-89-0

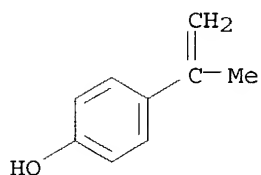
CMF C7 H12 O3



CM 2

CRN 4286-23-1

CMF C9 H10 O

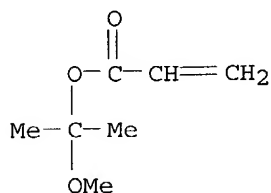


RN 178953-92-9 CAPLUS  
 CN 2-Propenoic acid, 1-methoxy-1-methylethyl ester, polymer with  
 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 178824-89-0

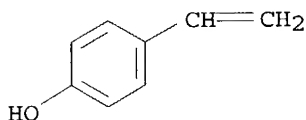
CMF C7 H12 O3



CM 2

CRN 2628-17-3

CMF C8 H8 O



IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST radiation sensitive resin compn; vinylphenol deriv copolymer radiation compn; acid generating compd radiation compn; elec app resist radiation sensitive

IT Electric apparatus

(patterning; radiation-sensitive resist resin compn. for)

IT Resists

(radiation-sensitive resist resin compn.)

IT 66003-78-9, Triphenylsulfonium triflate 126615-05-2, Pyrogallol trimethanesulfonate 133710-62-0 178824-93-6

RL: TEM (Technical or engineered material use); USES (Uses)

(acid generator; radiation-sensitive resist resin compn.)

IT 178953-87-2P, p-Isopropenylphenol-1-ethoxyethyl acrylate copolymer

178953-88-3P, p-Vinylphenol-1-ethoxyethyl acrylate copolymer

178953-89-4P 178953-90-7P 178953-91-8P

178953-92-9P 178953-93-0P 178953-94-1P 178953-95-2P

178953-97-4P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(radiation-sensitive resist resin compn.)

L30 ANSWER 55 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:288297 CAPLUS

DOCUMENT NUMBER: 125:22303

TITLE: Preparation of resist patterns and etched patterns

INVENTOR(S): Iwazawa, Naozumi

KOROMA EIC1700

PATENT ASSIGNEE(S): Kansai Paint Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, .14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08029979	A2	19960202	JP 1994-182800	19940711
JP 3403511	B2	20030506		

PRIORITY APPLN. INFO.: JP 1994-182800 19940711

AB An elec. current is applied between a conductive film-coated substrate, soaked as an anode in a water-sol. or water-dispersible electrodeposition-painting bath obtained by neutralization and water-solubilization of a photosensitive compn., and a counter electrode to form a photosensitive film on the substrate and the photosensitive film is imagewise exposed with an active ray to harden the exposed area, followed by development to remove the unexposed area to form a resist pattern. The photosensitive compn. contains (A) a copolymer [glass transition temp. (Tg) 20-100.degree.; acid value 20-150; hydroxyl value 20-120] comprising (a) .gtoreq.20 wt.% of .gtoreq.1 monomer selected from C1-3 monohydric alc. methacrylic esters and Me acrylate, (b) .gtoreq.1 CO2H-contg monomer selected from (meth)acrylic acid, (c) a OH-contg. polymg. monomer, and optionally (d) a polymg. monomer, different from monomer (a), providing its homopolymer with Tg .gtoreq.5.degree. and having no CO2H and OH groups, (B) a polyfunctional compd. having .gtoreq.2 photopolymerizable unsatd. groups in its mol., and (C) a photopolymn. initiator, in which the contents of A and B are 50-95 and 5-50 parts, resp., per 100 parts of the total wt. of A and B. The etched patterns are prepd. by contacting the patterned substrate with an etching soln. to remove the conductive film exposed thereon. The process shows good latitude in patterning and highly accurate, high resolu. resist patterns with good pattern-reproducibility are obtained, and the process is useful for manuf. of elec. circuit board. Thus, to a soln. of Me methacrylate-acrylic acid-2-hydroxyethyl methacrylate-Bu methacrylate-styrene copolymer (Tg 75.degree.; acid value 85; hydroxyl value 56) were added Et3N, trimethylolpropane triacrylate, and N,N'-tetramethyl-4,4'-diaminobenzophenone, and the mixt. was dispersed in water to give an electrodeposition-painting bath. A resist pattern was formed by using the bath and a Cu-clad glass-epoxy resin plate for the substrate.

IT 177348-16-2P 177348-18-4P 177348-20-8P  
 177348-21-9P, Acrylic acid-butyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate-styrene copolymer triethylamine salt  
 177348-22-0P, Acrylic acid-butyl methacrylate-tert-butyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer triethylamine salt  
 177348-23-1P, Acrylic acid-butyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer triethylamine salt  
 177348-25-3P, Acrylic acid-ethyl methacrylate-2-hydroxyethyl methacrylate-2-hydroxypropyl

methacrylate-methyl methacrylate copolymer triethylamine salt  
**177348-27-5P**, Acrylic acid-2-hydroxyethyl methacrylate-methyl  
 acrylate-propyl methacrylate copolymer triethylamine salt  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (photoresist compn. for etching pattern formation)

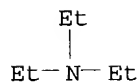
RN 177348-16-2 CAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-hydroxyethyl  
 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 2-[2-(4-  
 methylphenoxy)ethoxy]ethyl 2-methyl-2-propenoate and 2-propenoic acid,  
 compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 177348-15-1

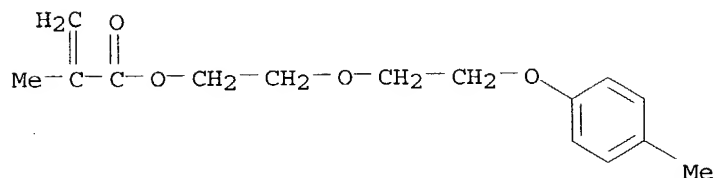
CMF (C15 H20 O4 . C8 H14 O2 . C6 H10 O3 . C5 H8 O2 . C3 H4 O2)x

CCI PMS

CM 3

CRN 138150-43-3

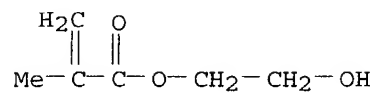
CMF C15 H20 O4



CM 4

CRN 868-77-9

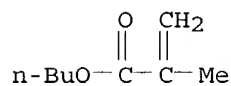
CMF C6 H10 O3



CM 5

CRN 97-88-1

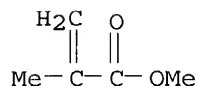
CMF C8 H14 O2



CM 6

CRN 80-62-6

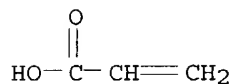
CMF C5 H8 O2



CM 7

CRN 79-10-7

CMF C3 H4 O2



RN 177348-18-4 CAPLUS

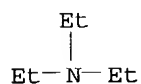
CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 2-hydroxyethyl  
2-methyl-2-propenoate, methyl 2-propenoate, 2-phenoxyethyl  
2-methyl-2-propenoate, 2-propenoic acid, propyl 2-methyl-2-propenoate and  
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate, compd. with  
N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

KOROMA EIC1700

CMF C6 H15 N



CM 2

CRN 177348-17-3

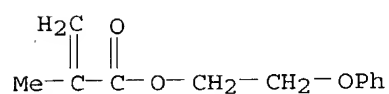
CMF (C13 H20 O2 . C12 H14 O3 . C7 H12 O2 . C6 H10 O3 . C6 H10 O2 . C4 H6 O2 . C3 H4 O2) x

CCI PMS

CM 3

CRN 10595-06-9

CMF C12 H14 O3

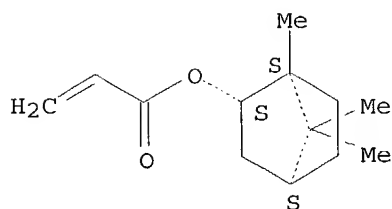


CM 4

CRN 5888-33-5

CMF C13 H20 O2

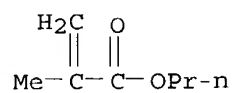
Relative stereochemistry.



CM 5

CRN 2210-28-8

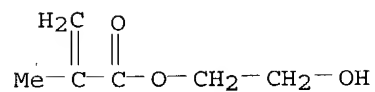
CMF C7 H12 O2



CM 6

CRN 868-77-9

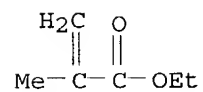
CMF C6 H10 O3



CM 7

CRN 97-63-2

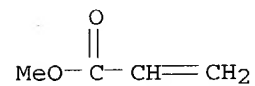
CMF C6 H10 O2



CM 8

CRN 96-33-3

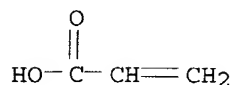
CMF C4 H6 O2



CM 9

CRN 79-10-7

CMF C3 H4 O2

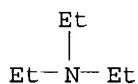


RN 177348-20-8 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 2-hydroxyethyl  
 2-methyl-2-propenoate, methyl 2-propenoate, 2-methylpropyl  
 2-methyl-2-propenoate, 2-phenoxyethyl 2-propenoate and 2-propenoic acid,  
 compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 177348-19-5

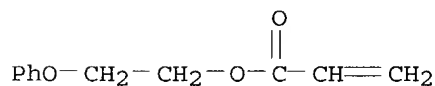
CMF (C11 H12 O3 . C8 H14 O2 . C6 H10 O3 . C6 H10 O2 . C4 H6 O2 . C3 H4  
 O2)x

CCI PMS

CM 3

CRN 48145-04-6

CMF C11 H12 O3

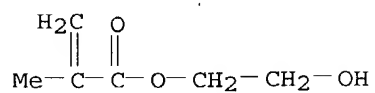


CM 4

CRN 868-77-9

CMF C6 H10 O3

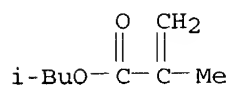




CM 5

CRN 97-86-9

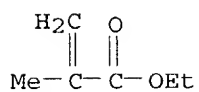
CMF C8 H14 O2



CM 6

CRN 97-63-2

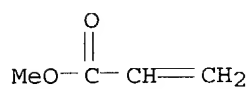
CMF C6 H10 O2



CM 7

CRN 96-33-3

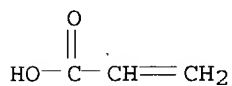
CMF C4 H6 O2



CM 8

CRN 79-10-7

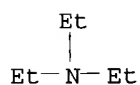
CMF C3 H4 O2



RN 177348-21-9 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenylbenzene,  
 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and  
 2-propenoic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
 CMF C6 H15 N

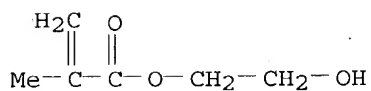


CM 2

CRN 35641-31-7  
 CMF (C8 H14 O2 . C8 H8 . C6 H10 O3 . C5 H8 O2 . C3 H4 O2)x  
 CCI PMS

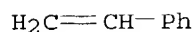
CM 3

CRN 868-77-9  
 CMF C6 H10 O3



CM 4

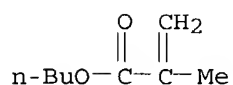
CRN 100-42-5  
 CMF C8 H8



CM 5

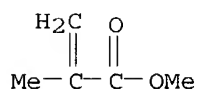
KOROMA EIC1700

CRN 97-88-1  
CMF C8 H14 O2



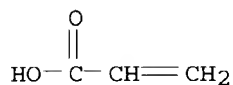
CM 6

CRN 80-62-6  
CMF C5 H8 O2



CM 7

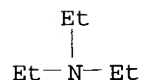
CRN 79-10-7  
CMF C3 H4 O2



RN 177348-22-0 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-propenoic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N



CM 2

CRN 80821-93-8

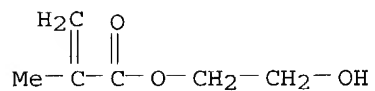
CMF (C8 H14 O2 . C8 H14 O2 . C6 H10 O3 . C5 H8 O2 . C3 H4 O2)x

CCI PMS

CM 3

CRN 868-77-9

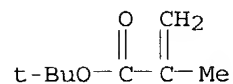
CMF C6 H10 O3



CM 4

CRN 585-07-9

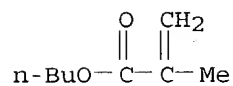
CMF C8 H14 O2



CM 5

CRN 97-88-1

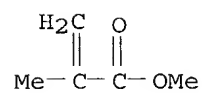
CMF C8 H14 O2



CM 6

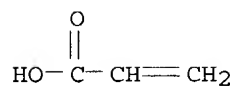
CRN 80-62-6

CMF C5 H8 O2



CM 7

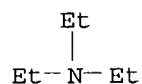
CRN 79-10-7  
CMF C3 H4 O2



RN 177348-23-1 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-hydroxyethyl  
2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-propenoic acid,  
compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

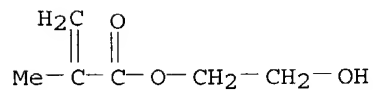


CM 2

CRN 38415-32-6  
CMF (C8 H14 O2 . C6 H10 O3 . C5 H8 O2 . C3 H4 O2)x  
CCI PMS

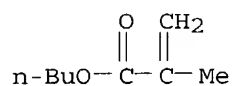
CM 3

CRN 868-77-9  
CMF C6 H10 O3



CM 4

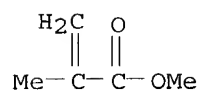
CRN 97-88-1  
CMF C8 H14 O2



CM 5

CRN 80-62-6

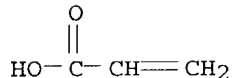
CMF C5 H8 O2



CM 6

CRN 79-10-7

CMF C3 H4 O2



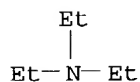
RN 177348-25-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxypropyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-propenoic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

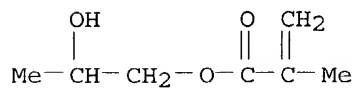
CRN 177348-24-2

CMF (C7 H12 O3 . C6 H10 O3 . C6 H10 O2 . C5 H8 O2 . C3 H4 O2)x  
CCI PMS

CM 3

CRN 923-26-2

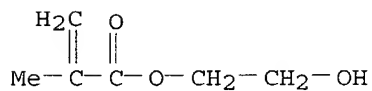
CMF C7 H12 O3



CM 4

CRN 868-77-9

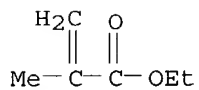
CMF C6 H10 O3



CM 5

CRN 97-63-2

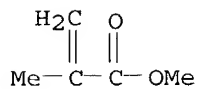
CMF C6 H10 O2



CM 6

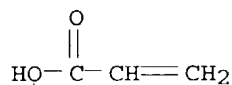
CRN 80-62-6

CMF C5 H8 O2



CM 7

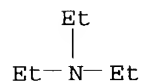
CRN 79-10-7  
CMF C3 H4 O2



RN 177348-27-5 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-propenoate, 2-propenoic acid and propyl 2-methyl-2-propenoate, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

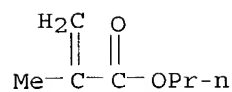


CM 2

CRN 177348-26-4  
CMF (C7 H12 O2 . C6 H10 O3 . C4 H6 O2 . C3 H4 O2)x  
CCI PMS

CM 3

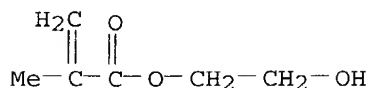
CRN 2210-28-8  
CMF C7 H12 O2



CM 4

CRN 868-77-9  
CMF C6 H10 O3

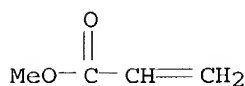




CM 5

CRN 96-33-3

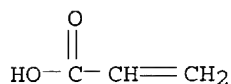
CMF C4 H6 O2



CM 6

CRN 79-10-7

CMF C3 H4 O2



IC ICM G03F007-033

ICS C09D005-44; C25D013-06; G03F007-027; G03F007-028; H05K003-06

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST resist pattern formation electrodeposition painting; acrylic copolymer resist

IT Resists

(photo-, photoresist compn. for etching pattern formation)

IT 177348-16-2P 177348-18-4P 177348-20-8P

177348-21-9P, Acrylic acid-butyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate-styrene copolymer triethylamine salt

177348-22-0P, Acrylic acid-butyl methacrylate-tert-butyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer triethylamine salt

177348-23-1P, Acrylic acid-butyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer triethylamine salt

177348-25-3P, Acrylic acid-ethyl methacrylate-2-hydroxyethyl methacrylate-2-hydroxypropyl methacrylate-methyl methacrylate copolymer triethylamine salt

177348-27-5P, Acrylic acid-2-hydroxyethyl methacrylate-methyl

acrylate-propyl methacrylate copolymer triethylamine salt

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material)

use); PREP (Preparation); USES (Uses)

(photoresist compn. for etching pattern formation)

IT 4986-89-4, Pentaerythritol tetraacrylate 15625-89-5, Trimethylolpropane triacrylate 60506-81-2, Dipentaerythritol pentaacrylate 94108-97-1, Ditrimeethylolpropane tetraacrylate

RL: TEM (Technical or engineered material use); USES (Uses)

(photoresist compn. for etching pattern formation)

L30 ANSWER 56 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:435902 CAPLUS

DOCUMENT NUMBER: 122:326534

TITLE: Photosensitive adhesive composition

INVENTOR(S): Yanagida, Yasuo; Murakami, Kazuo; Nogawa, Kyoko

PATENT ASSIGNEE(S): Dainippon Ink & Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06324486	A2	19941125	JP 1993-111599	19930513
PRIORITY APPLN. INFO.:			JP 1993-111599	19930513

AB The title compn., used in the formation of a high resoln. pattern comprising the steps of forming a photosensitive thin film with surface tackiness on a substrate, transferring and fixing an light-shielding solid mask on the film, irradiating the film with an active ray from the mask side to harden the exposed area, peeling the the mask off, and developing the film to remove the unexposed area, contain a .gtoreq.2-functional photosensitive resin having glass transition temp. (Tg) from -100 to 20.degree. and mol wt. .gtoreq.1000 and a tackiness-providing agent sol. in the resin. The compn. is able to form a uniform thin coating on which metallic masks can be fixed, and provides high resoln. resist **patterns** by uniform exposure **process**. Thus, a photosensitive adhesive compn. comprised polypropylene glycol-tolyene diisocyanate-hydroxyethyl acrylate adduct (Tg -28.degree.; mol. wt. 6754), a reactant of rosin with 1,6-hexanediol diglycidyl ether, epoxy acrylate, pentaerythritol tetraacrylate, and a photoinitiator.

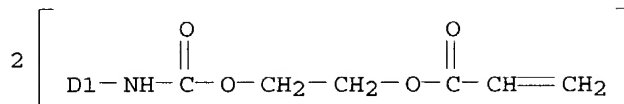
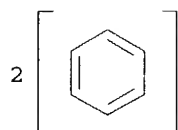
IT 163687-43-2

RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive photoresist compn. useful for making elec. circuits)

RN 163687-43-2 CAPLUS

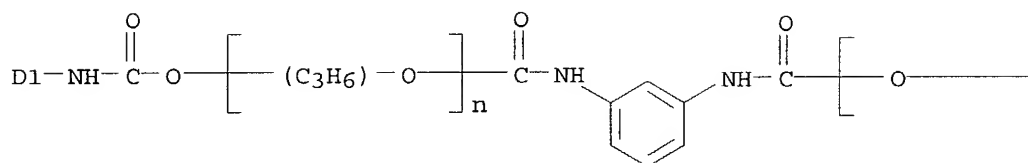
CN Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.'-[(methyl-1,3-phenylene)bis(iminocarbonyl)]bis[.omega.-[[[[methyl[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]phenyl]amino]carbonyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A

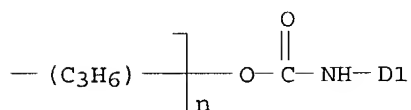


3 ( D1-Me )

PAGE 2-A



PAGE 2-B



IC ICM G03F007-027  
 ICS G03F007-004; G03F007-34  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 ST tackiness providing agent adhesive photoresist  
 IT Rosin  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (modified, tackiness providing agent; adhesive photoresist compn. useful for making elec. circuits)  
 IT Resists  
 (photo-, adhesive photoresist compn. useful for making elec. circuits)

IT Urethane polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyether-, acrylates, adhesive photoresist compn. useful for making  
 elec. circuits)

IT 79-10-7D, 2-Propenoic acid, reaction products with rosin and glycidyl  
 ether 814-68-6D, Acrylic acid chloride, reaction products with rosin and  
 glycidyl ether 1675-54-3D, reaction products with rosin 16096-31-4D,  
 reaction products with rosin  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
 use); USES (Uses)  
 (adhesive photoresist compn. useful for making elec. circuits)

IT 163633-56-5 163687-43-2  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (adhesive photoresist compn. useful for making  
 elec. circuits)

L30 ANSWER 57 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1992:581805 CAPLUS  
 DOCUMENT NUMBER: 117:181805  
 TITLE: Patterning of positive-working resists  
 INVENTOR(S): Kodachi, Akiko; Takechi, Satoshi  
 PATENT ASSIGNEE(S): Fujitsu K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04052648	A2	19920220	JP 1990-162034	19900620
PRIORITY APPLN. INFO.:			JP 1990-162034	19900620

AB The title **patterning process** comprises the steps of:  
 (1) coating a substrate with a photoresist contg. radiation-sensitive  
 polymer and an azido compd.; (2) heating the photoresist layer during or  
 following exposure to UV or deep-UV, (3) patternwise exposing the  
 photoresist layer to radiation (e.g. on electron beam), and (4) developing  
 by removing the photoresist layer from the exposed regions using a  
 developer soln. Since crosslinking is effected not only by heat treating,  
 but also by UV irradiation, resistance toward the developing soln. is  
 significantly increased to allow the formation of sharp patterns.

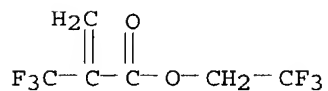
IT 131075-47-3 140127-69-1 141182-71-0  
 142214-38-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoresist compn. contg.)

RN 131075-47-3 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (trimethylsilyl)methyl ester, polymer with  
 2,2,2-trifluoroethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX  
 NAME)

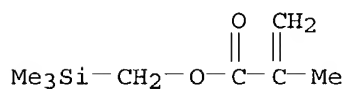
CM 1

CRN 91520-39-7  
CMF C6 H4 F6 O2



CM 2

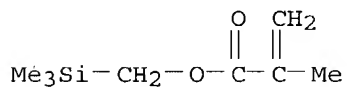
CRN 18269-97-1  
CMF C8 H16 O2 Si



RN 140127-69-1 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, (trimethylsilyl)methyl ester, polymer with  
2-(trifluoromethyl)-2-propenoic acid (9CI) (CA INDEX NAME)

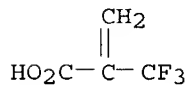
CM 1

CRN 18269-97-1  
CMF C8 H16 O2 Si



CM 2

CRN 381-98-6  
CMF C4 H3 F3 O2



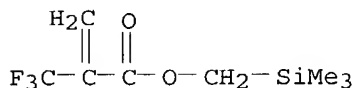
RN 141182-71-0 CAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, (trimethylsilyl)methyl ester,  
homopolymer (9CI) (CA INDEX NAME)

KOROMA EIC1700

CM 1

CRN 132670-06-5

CMF C8 H13 F3 O2 Si



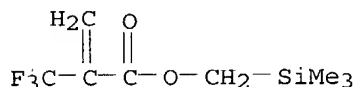
RN 142214-38-8 CAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with (trimethylsilyl)methyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 132670-06-5

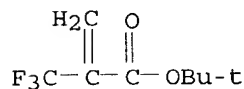
CMF C8 H13 F3 O2 Si



CM 2

CRN 105935-24-8

CMF C8 H11 F3 O2



IC ICM G03F007-039

ICS G03F007-075; G03F007-26; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST photoresist patterning crosslinking azide

IT Resists

(photo-, azo crosslinking agent contg.)

IT 2915-44-8 5284-79-7 5284-80-0 14128-15-5, 4,4'-Diazidochalcone

20237-98-3 48180-65-0 72695-23-9

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agent, photoresist compn. contg.)

KOROMA EIC1700

IT 131075-47-3 140127-69-1 141182-71-0  
142214-38-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compn. contg.)

L30 ANSWER 58 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1992:245291 CAPLUS

DOCUMENT NUMBER: 116:245291

TITLE: Resist and **process** for forming  
**patterns** using the same

INVENTOR(S): Abe, Naomichi; Nozaki, Koji

PATENT ASSIGNEE(S): Fujitsu Ltd., Japan

SOURCE: Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 465064	A2	19920108	EP 1991-305644	19910621
EP 465064	A3	19920909		
EP 465064	B1	19981209		
R: DE, FR, GB				
JP 04226462	A2	19920817	JP 1991-137782	19910610
PRIORITY APPLN. INFO.:			JP 1990-172005	19900629
			JP 1990-172006	19900629

AB A **process** for **patterning** comprises applying a resist material comprising a mixt. of .gtoreq.1 polymer selected from -[CH<sub>2</sub>-CH(OR<sub>1</sub>)]- and -[CH<sub>2</sub>-C(R<sub>2</sub>)(CO<sub>2</sub>CR<sub>3</sub>R<sub>4</sub>CHR<sub>5</sub>R<sub>6</sub>)]n- [R<sub>1</sub> = aryl, aralkyl; R<sub>2</sub> = H, alkyl; R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> = H, halo, alkyl, aryl, aralkyl, with the proviso that .gtoreq.1 of R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> = aryl, aralkyl] with a substance which generates an acid by exposure on a substrate to be treated, followed by exposure and heat treatment, and then developing the system in a downflow stream of O-contg. plasma. The resist has high sensitivity and produces a pattern with good thickness.

IT 28825-60-7 56963-83-8, Poly-.alpha.,.alpha.-dimethylbenzyl methacrylate

RL: USES (Uses)

(in dry developable **resist compn.**)

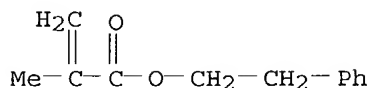
RN 28825-60-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-phenylethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3683-12-3

CMF C12 H14 O2



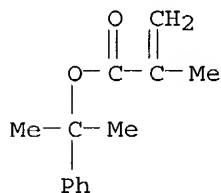
RN 56963-83-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-phenylethyl ester, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

CRN 54554-17-5

CMF C13 H16 O2



IC ICM G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 76

ST photoresist acrylic polymer microelectronics

IT Semiconductor devices

(dry developable resist for submicron structure in)

IT Resists

(photo-, acrylic polymer and acid generator in dry developable)

IT Electric circuits

(printed, dry developable resist for submicron structure in)

IT 118-79-6, 2,4,6-Tribromophenol 437-13-8 9003-19-4, Polyvinyl ether  
24504-22-1 25588-11-8, Polyvinylphenyl ether 25610-98-4

28825-60-7 41024-50-4 52434-90-9 56530-39-3

56963-83-8, Poly-.alpha.,.alpha.-dimethylbenzyl methacrylate

57900-42-2, Triphenylsulfonium hexafluoroarsenate 58109-40-3,

Diphenyliodonium hexafluorophosphate 141573-11-7 141573-12-8

141573-13-9

RL: USES (Uses)

(in dry developable resist compn.)

L30 ANSWER 59 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1988:414771 CAPLUS

DOCUMENT NUMBER: 109:14771

TITLE: Fabrication of electronic devices utilizing  
lithographic techniques and resist from  
triallcylsilylalkyl acrylate copolymer

INVENTOR(S): Novembre, Anthony Edward; Reichmanis, Elsa

KOROMA EIC1700



PATENT ASSIGNEE(S): American Telephone and Telegraph Co., USA  
 SOURCE: Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 236914	A2	19870916	EP 1987-103008	19870303
EP 236914	A3	19871202		
R: DE, FR, GB, NL				
US 4701342	A	19871020	US 1986-837018	19860306
CA 1312843	A1	19930119	CA 1987-531265	19870305
JP 62235943	A2	19871016	JP 1987-50434	19870306
JP 2528110	B2	19960828		

PRIORITY APPLN. INFO.: US 1986-837018 19860306

AB The title method comprises the steps of forming a radiation sensitive layer contg. a copolymer of a trialkylsilylalkyl acrylate, **patterning**, and **processing**. The copolymers form neg.-acting resists that are sensitive to electron beam and UV radiation. These materials are particularly useful in bilevel resist application for fabricating masks or for device processing. Thus, a chloromethyl styrene-trimethylsilylmethyl methacrylate copolymer was prepd., coated on a Si wafer in soln. form, spun, backed, exposed to electron beam to produce a patterns and developed. The pattern had sensitivity 2 .mu.C/cm2 and contrast 1.8.

IT 103235-38-7

RL: USES (Uses)  
 (radiation resist compn. contg.)

RN 103235-38-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, (trimethylsilyl)methyl ester, polymer with (chloromethyl)ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 30030-25-2

CMF C9 H9 Cl

CCI IDS



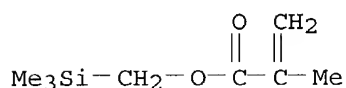
D1-CH<sub>2</sub>-Cl

D1-CH=CH<sub>2</sub>

CM 2

CRN 18269-97-1

CMF C8 H16 O2 Si



IC ICM G03F007-10

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST electronic device resist silyl acrylate; lithog resist neg working; electron beam resist

IT Resists

(neg. working, contg. trialkylsilylalkyl acrylate copolymer)

IT Electric circuits

(resists contg. trialkylsilylalkyl acrylate copolymer for)

IT 103235-38-7

RL: USES (Uses)

(radiation resist compn. contg.)

L30 ANSWER 60 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1986:600516 CAPLUS

DOCUMENT NUMBER: 105:200516

TITLE: Fine insulator pattern formation

INVENTOR(S): Kataoka, Fumio; Shoji, Fusaji

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

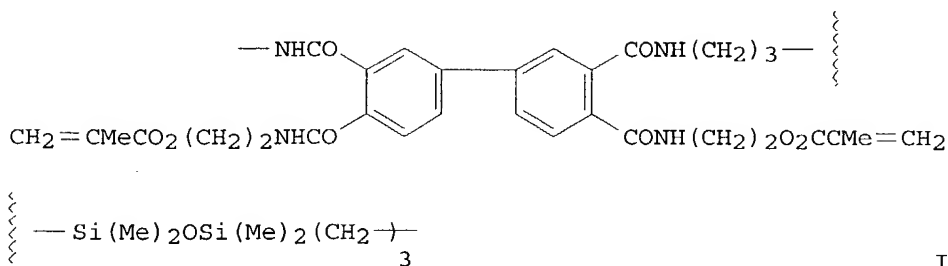
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

KOROMA EIC1700

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61067228	A2	19860407	JP 1984-187916	19840910
PRIORITY APPLN. INFO.:			JP 1984-187916	19840910

GI



AB The claimed **patterning process** involves the following steps: (1) formation of a polyimide insulator layer on a substrate; (2) coating of the insulator layer with a Si-contg. polyimide precursor type photosensitive (or radiation-sensitive) layer; (3) drying of the photosensitive layer at 50-120.degree.; (4) patternwise exposure of the photosensitive layer; (5) development; (6) hardening of the pattern at 150-500.degree. to form a polyimide pattern; and (7) O plasma treatment to improve the plasma etching resistance of the polyimide pattern and to etch the polyimide insulator layer to give a 2-layer structured insulator pattern. Thus, a Si substrate was coated with P/Q (a polyimide), then coated with a polyimide precursor having repeating units of the formula I, dried at 70.degree., imagewise exposed to deep UV, developed, heated at 350.degree., and etched in an O plasma to give a fine polyimide pattern.

IT 105060-85-3 105060-87-5 105060-89-7  
 105060-91-1 105060-92-2 105060-93-3  
 105062-28-0 105082-40-4 105082-42-6  
 105082-45-9

RL: USES (Uses)

(resist compn. contg., for polyimide insulator pattern formation)

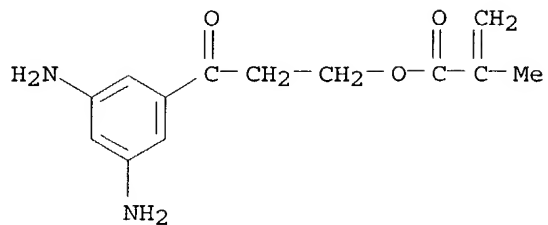
RN 105060-85-3 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetracarboxylic acid, polymer with 3-(3,5-diaminophenyl)-3-oxopropyl 2-methyl-2-propenoate and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 100577-06-8

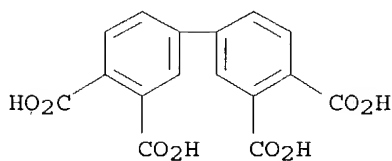
CMF C13 H16 N2 O3



CM 2

CRN 22803-05-0

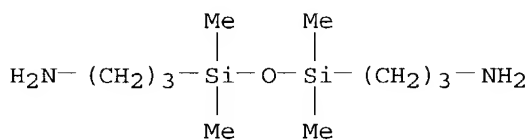
CMF C16 H10 O8



CM 3

CRN 2469-55-8

CMF C10 H28 N2 O Si2



RN 105060-87-5 CAPLUS

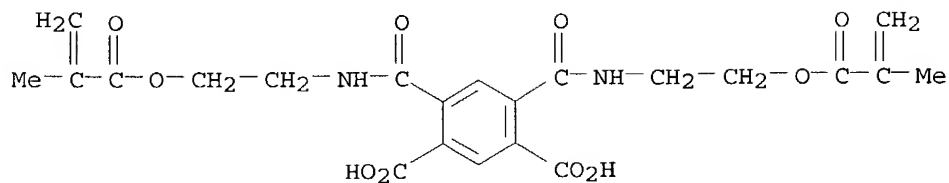
CN 1,3-Benzenedicarboxylic acid, 4,6-bis[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl-, polymer with 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 3,5-diaminobenzoate and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 105060-86-4

CMF C22 H24 N2 O10

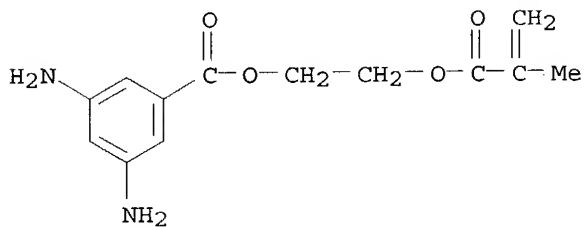
KOROMA EIC1700



CM 2

CRN 76067-81-7

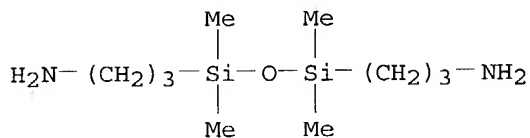
CMF C13 H16 N2 O4



CM 3

CRN 2469-55-8

CMF C10 H28 N2 O Si2



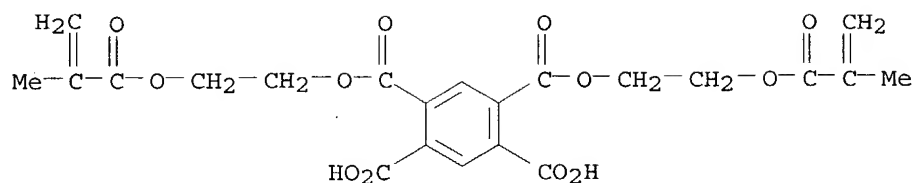
RN 105060-89-7 CAPLUS

CN 1,2,4,5-Benzenetetracarboxylic acid, 1,5-bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 3,5-diaminobenzoate and 3,3'-[1,4-phenylenebis(dimethylsilylene)]bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 83418-61-5

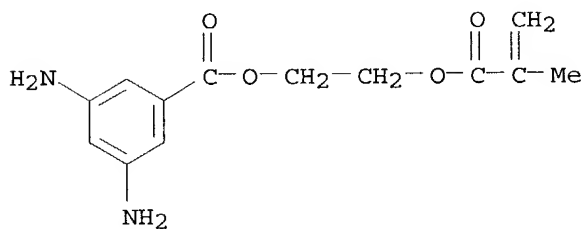
CMF C22 H22 O12



CM 2

CRN 76067-81-7

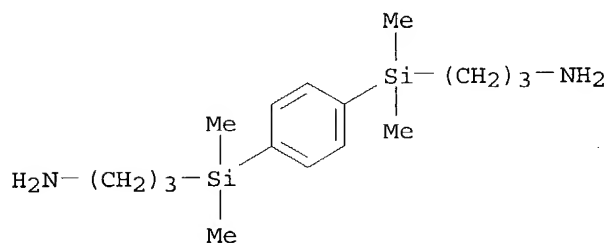
CMF C13 H16 N2 O4



CM 3

CRN 20152-18-5

CMF C16 H32 N2 Si2



RN 105060-91-1 CAPLUS

CN [1,1'-Biphenyl]-3,3'-dicarboxylic acid, 4,4'-bis[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl]-, polymer with 2-[(3,5-diaminobenzoyl)amino]ethyl 2-methyl-2-propenoate and 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

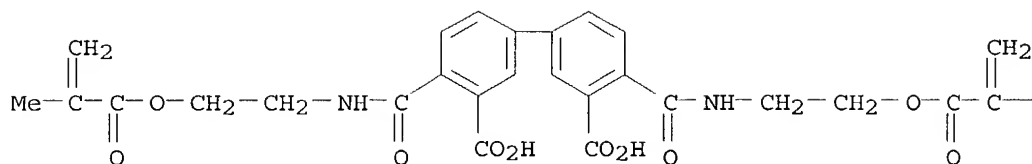
CM 1

CRN 105060-90-0

CMF C28 H28 N2 O10

KOROMA EIC1700

PAGE 1-A



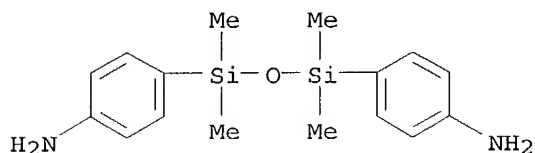
PAGE 1-B

— Me

CM 2

CRN 85214-57-9

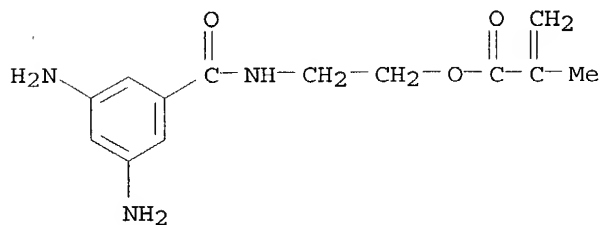
CMF C16 H24 N2 O Si2



CM 3

CRN 76081-57-7

CMF C13 H17 N3 O3



RN 105060-92-2 CAPLUS

CN [1,1'-Biphenyl]-3,3',4,4'-tetracarboxylic acid, polymer with  
2-[(1-oxo-2-propenyl)oxy]ethyl 3,5-diaminobenzoate and

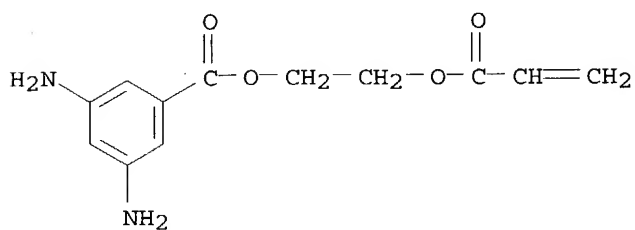
KOROMA EIC1700

3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 83414-70-4

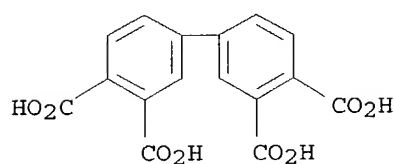
CMF C12 H14 N2 O4



CM 2

CRN 22803-05-0

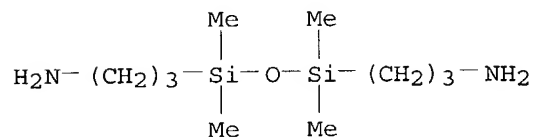
CMF C16 H10 O8



CM 3

CRN 2469-55-8

CMF C10 H28 N2 O Si2



RN 105060-93-3 CAPLUS

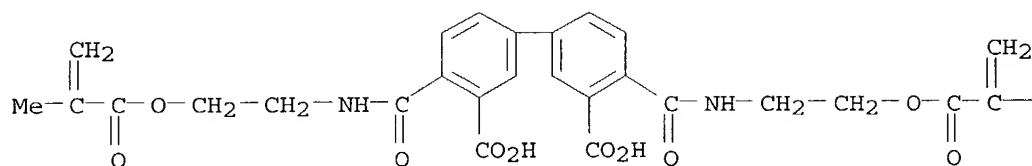
CN [1,1'-Biphenyl]-3,3'-dicarboxylic acid, 4,4'-bis[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl]-, polymer with 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1



CRN 105060-90-0  
CMF C28 H28 N2 O10

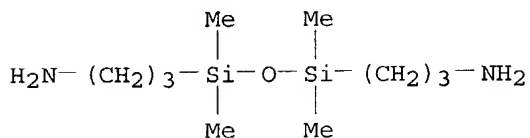
PAGE 1-A



PAGE 1-B

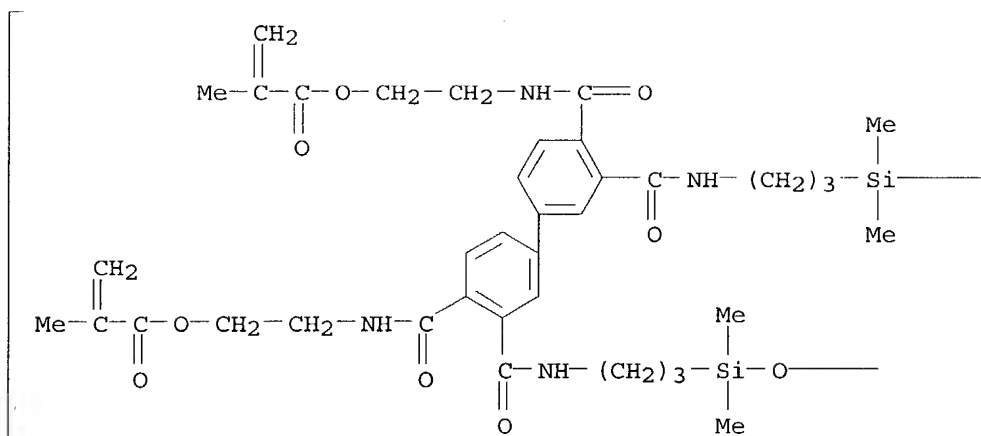
— Me

CM 2  
CRN 2469-55-8  
CMF C10 H28 N2 O Si2



RN 105062-28-0 CAPLUS  
CN Poly[oxy(dimethylsilylene)-1,3-propanediyliminocarbonyl[4,4'-bis[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl][1,1'-biphenyl]-3,3'-diyl]carbonylimino-1,3-propanediyl(dimethylsilylene)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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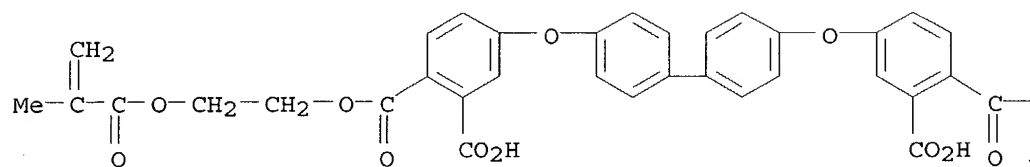
RN 105082-40-4 CAPLUS  
 CN 1,2-Benzenedicarboxylic acid, 4,4'-[[1,1'-biphenyl]-4,4'-diylbis(oxy)]bis-  
 , 1,1'-bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with  
 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 3,5-diaminobenzoate and  
 3,3'-[1,4-phenylenebis(dimethylsilylene)]bis[1-propanamine] (9CI) (CA  
 INDEX NAME)

CM 1

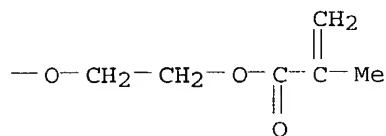
CRN 105082-39-1  
 CMF C40 H34 O14

KOROMA EIC1700

PAGE 1-A



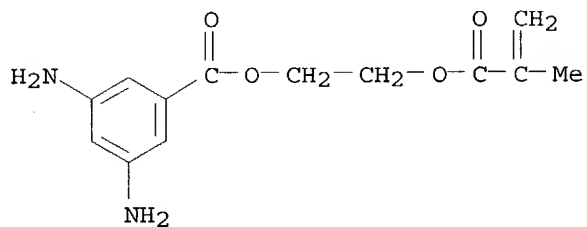
PAGE 1-B



CM 2

CRN 76067-81-7

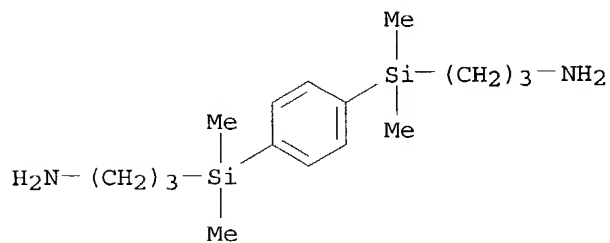
CMF C13 H16 N2 O4



CM 3

CRN 20152-18-5

CMF C16 H32 N2 Si2



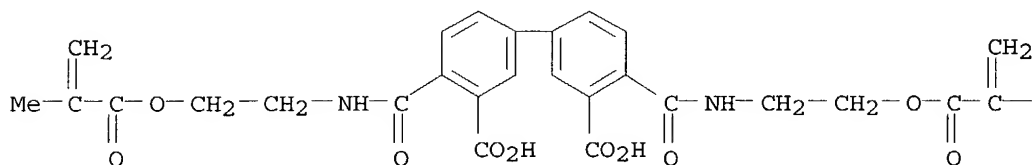
KOROMA EIC1700

RN 105082-42-6 CAPLUS  
 CN [1,1'-Biphenyl]-3,3'-dicarboxylic acid, 4,4'-bis[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl]-, polymer with 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 2-amino-5-(4-aminophenoxy)benzoate and 3,3'-[1,4-phenylenebis(dimethylsilylene)]bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 105060-90-0  
 CMF C28 H28 N2 O10

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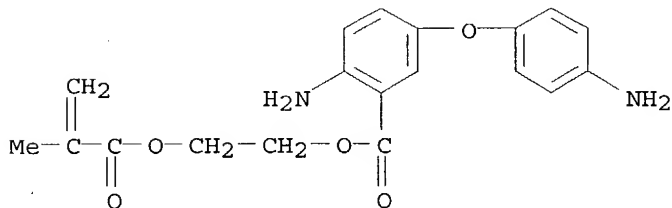


PAGE 1-B

— Me

CM 2

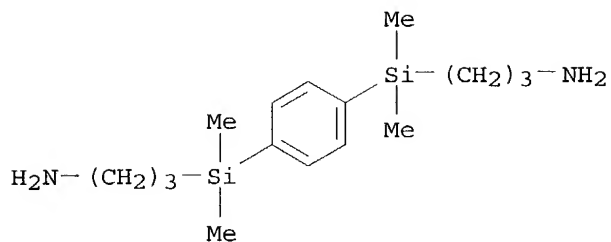
CRN 76081-42-0  
 CMF C19 H20 N2 O5



CM 3

CRN 20152-18-5  
 CMF C16 H32 N2 Si2

KOROMA EIC1700



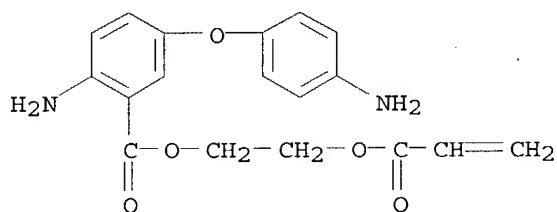
RN 105082-45-9 CAPLUS

CN 1,3-Benzenedicarboxylic acid, 4,6-bis[[[2-[(1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl]-, polymer with 2-[(1-oxo-2-propenyl)oxy]ethyl 2-amino-5-(4-aminophenoxy)benzoate and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 105082-44-8

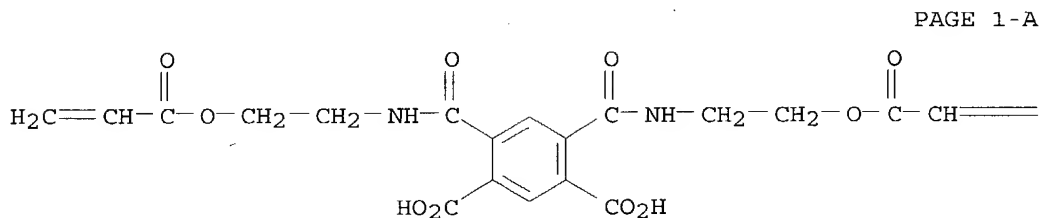
CMF C18 H18 N2 O5



CM 2

CRN 105082-43-7

CMF C20 H20 N2 O10



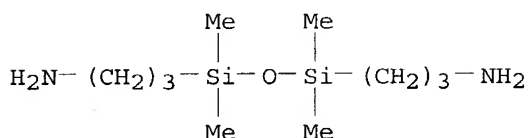
PAGE 1-A

=CH<sub>2</sub>

CM 3

CRN 2469-55-8

CMF C10 H28 N2 O Si2



IC ICM H01L021-302

ICS G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST photoresist polyamic acid siloxane; polyimide siloxane elec insulator pattern

IT Electric insulators and Dielectrics  
(polyimide-siloxane, patterning of)IT Resists  
(electron-beam, siloxane-polyimide precursors as)IT Resists  
(photo-, siloxane-polyimide precursors as)IT Siloxanes and Silicones, uses and miscellaneous  
RL: USES (Uses)  
(polyimide-, insulator patterns of)IT Polyimides, uses and miscellaneous  
RL: USES (Uses)  
(siloxane-, insulator patterns of)IT 25036-53-7 26615-45-2 55478-71-2 105062-24-6 105062-25-7  
135876-24-3  
RL: USES (Uses)  
(elec. insulator of, patterns of)IT 28501-43-1 85947-90-6 105060-83-1  
RL: USES (Uses)  
(polyimide insulators from)IT 20602-77-1 42759-78-4 84389-35-5 85179-71-1  
RL: USES (Uses)  
(resist compn. contg. polyamic acid and siloxane and, for polyimide insulator patterns formation)

IT 105060-84-2 105060-85-3 105060-87-5

KOROMA EIC1700

105060-89-7 105060-91-1 105060-92-2  
 105060-93-3 105062-27-9 105062-28-0 105082-36-8  
 105082-38-0 105082-40-4 105082-42-6  
 105082-45-9 154999-00-5

RL: USES (Uses)

(resist compn. contg., for polyimide insulator  
 pattern formation)

L30 ANSWER 61 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1986:159650 CAPLUS

DOCUMENT NUMBER: 104:159650

TITLE: Electrode pattern formation process

INVENTOR(S): Sugata, Masayuki; Nishida, Yoshiyuki

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60211995	A2	19851024	JP 1984-68902	19840406

PRIORITY APPLN. INFO.: JP 1984-68902 19840406

AB A conductor film supported by a polymer film is coated with a compn. consisting of a polyfunctional monomer, a photopolymn. initiator and a CO2H group-contg. binder resin, then imagewise exposed and treated with an alk. soln. to form electrode patterns. The polyfunctional monomer is preferably selected from acrylate esters of polyhydric alcs. and acrylic acid copolymers. The method is esp. useful when Se oxide and/or In2O3 type conductors are used for formation of electrodes.

IT 25585-75-5 25767-39-9

RL: TEM (Technical or engineered material use); USES (Uses)

(photoresist compns. contg., for electrode pattern  
 formation)

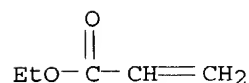
RN 25585-75-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene, ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5

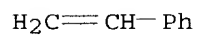
CMF C5 H8 O2



CM 2

CRN 100-42-5

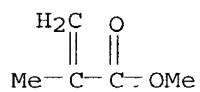
CMF C8 H8



CM 3

CRN 80-62-6

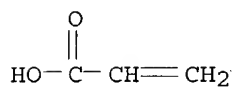
CMF C5 H8 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



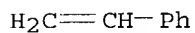
RN 25767-39-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

CMF C8 H8



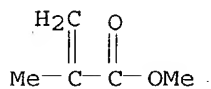
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CRN 80-62-6

CMF C5 H8 O2

KOROMA EIC1700

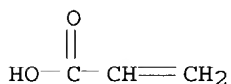




CM 3

CRN 79-10-7

CMF C3 H4 O2



IC ICM H05K003-06

ICS C23F001-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST electrode pattern lithog fabrication; acrylic acid copolymer photoresist

IT Electrodes

(patterned, lithog. fabrication of)

IT Resists

(photo-, contg. acrylic acid copolymers and polyhydric alc. acrylates, for electrode pattern formation)

IT 70-55-3 90-94-8 95-14-7 119-61-9, uses and miscellaneous  
15625-89-5 25585-75-5 25767-39-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compns. contg., for electrode pattern formation)

L30 ANSWER 62 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1986:120015 CAPLUS

DOCUMENT NUMBER: 104:120015

TITLE: Materials for release-developable pattern formation

INVENTOR(S): Nakamura, Masanobu; Yanagida, Yasuo; Noguchi, Hiromichi

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60175045	A2	19850909	JP 1984-31144	19840221
PRIORITY APPLN. INFO.:			JP 1984-31144	19840221

KOROMA EIC1700

AB Transparent supports are coated with a photosensitive layer composed of (1) a graft polyester resin comprising a branched polymer of an addn.-polymg. monomer essentially contg. an acrylate monomer and/or a methacrylate monomer and a trunk polymer consisting of a polyester resin, (2) a photopolymg. compd. which has >2 addn.-polymg. double bonds in a mol. and is liq. at room temp., and (3) a photopolymn. initiator to give materials for release-developable pattern formation. The photosensitive layers break exactly at boundaries between exposed and unexposed parts to give well-defined relief patterns with high resoln. The materials also have excellent workability during **processing** and give relief **patterns** having good bonding properties to substrates and high resistance to etching and plating solns. Thus, an unsatd. polyester resin was synthesized by treating terephthalic acid 25.7, isophthalic acid 25.7, adipic acid 9.4, itaconic acid 1.7, ethylene glycol 8.8, and neopentyl glycol 29.5 parts in a N atm. at 220.degree. for 20 h in the presence of di-Bu tin oxide 0.4% followed by treating at 1-5 mm Hg and 220.degree. for 2 h. The polyester 50 parts was dissolved in Me iso-Bu ketone 233 parts, heated at 95.degree., added stepwise with a mixt. of styrene 15 and Me methacrylate 35 parts (contg. benzoyl peroxide 1%) for 2 h, and treated at 95.degree. for 5 h to give a graft polyester resin (wt. av. mol. wt. 180,000; no. av. mol. wt. 26,000). A soln. of the obtained graft polyester resin 33, a polyester polyacrylate (Aronix M-6200) 10, dipentaerythritol hexaacrylate 5, Irgacure 651 2.5, Oil Blue 0.1, methoxyhydroquinone 0.05, and MEK 15 parts was coated on a 16-.mu. poly(ethylene terephthalate) support to give a 50-.mu. layer, laminated on a Cu-laminated substrate, patternwise exposed to a 365-nm light source (4 mW/cm<sup>2</sup>) for 30 s, and the substrate peeled off at 35.degree. at a rate of 500 mm/min to obtain a pattern resolving 200-.mu. lines. No impairment of the pattern was obsd. during etching or plating process.

IT 100810-08-0

RL: USES (Uses)

(graft, **photoresist compns.** contg. photopolymg. compd. and photopolymn. initiator and, release-developable)

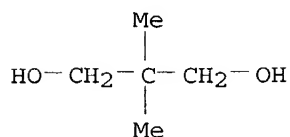
RN 100810-08-0 CAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, ethenylbenzene, hexanedioic acid, methylenebutanedioic acid and methyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 126-30-7

CMF C5 H12 O2

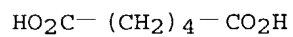


KOROMA EIC1700

CM 2

CRN 124-04-9

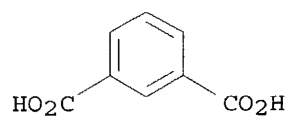
CMF C6 H10 O4



CM 3

CRN 121-91-5

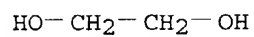
CMF C8 H6 O4



CM 4

CRN 107-21-1

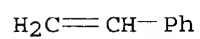
CMF C2 H6 O2



CM 5

CRN 100-42-5

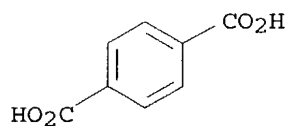
CMF C8 H8



CM 6

CRN 100-21-0

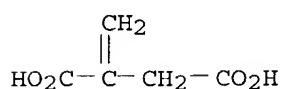
CMF C8 H6 O4



CM 7

CRN 97-65-4

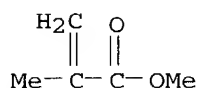
CMF C5 H6 O4



CM 8

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C001-68

ICA C08F002-48; G03C005-24

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST graft polyester releasable photoresist

IT Polyesters, uses and miscellaneous

RL: USES (Uses)

(graft, photoresist compns. contg. photopolyng. compd. and photopolymn. initiator and, release-developable)

IT Soldering

(masks, release-developable photosensitive compns. contg. graft polyester resin and photopolyng. compd. and photopolymn. initiator for prepn. of)

IT Resists

(photo-, contg. graft polyester resin and photopolyng. compd. and photopolymn. initiator, release-developable)

IT 100810-08-0

RL: USES (Uses)

(graft, **photoresist compns.** contg. photopolyng. compd. and photopolymn. initiator and, release-developable)

IT 824-46-4 1317-40-4 88922-69-4

KOROMA EIC1700

RL: USES (Uses)  
 (photoresist compns. contg. graft polyester resin and photopolymg. compd. and photopolymn. initiator and, release-developable)

IT 24650-42-8  
 RL: USES (Uses)  
 (photoresist compns. contg. graft polyester resin and photopolymg. compd. and, release-developable)

IT 868-77-9D, unsatd. polyester resin grafted with  
 RL: USES (Uses)  
 (photoresist compns. contg. photopolymg. compd. and photopolymn. initiator and, release-developable)

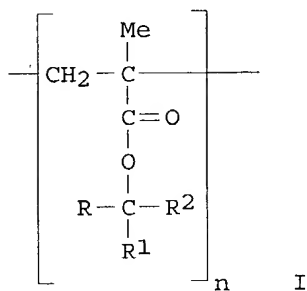
IT 29570-58-9  
 RL: USES (Uses)  
 (photoresists compns. contg. graft polyester resin and photopolymn. initiator and, release-developable)

L30 ANSWER 63 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1984:28176 CAPLUS  
 DOCUMENT NUMBER: 100:28176  
 TITLE: Solid state imaging elements  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 58149043	A2	19830905	JP 1982-33505	19820302
PRIORITY APPLN. INFO.:			JP 1982-33505	19820302

GI



AB A method for the prodn. of microfilters in a solid-state imaging device comprises 3 **processes**: (1) formation of a **patterned** mask on a wafer of solid state sensor using a pos. photoresist composed of a F-contg. methacrylate polymer (I; R, R<sup>1</sup> = H, alkyl; R<sup>2</sup> = alkyl

substituted by .gtoreq.1 F atom); (2) depositing a filter dye in vacuum on the masked wafer, and (3) selective removal of the deposited dye on the resist by washing. The method saves work and can form a layer consisting only of deposited dye, eliminating insertion of addnl. resist or an interlayer. It also enables the selection of a wider range of dyes. Thus, I (R = R1 = Me; R2 = CF2CF2H) was coated on a charge-coupled device wafer, prebaked, UV patternwise exposed, solvent-developed, subjected to uniform reexposure, and Sico Fast Red L3855 (CI 12370) deposited thereon in vacuum to a thickness of 4000 .ANG.. Blue and yellow filter patterns were then formed successively on the red-patterned wafer by repeating the above steps using Indigo Pure BASF (CI 73,000) and Sico Yellow D 1250 (CI 11,680), resp. The size of each pixel was 10 .times. 20 .mu.m. As compared with an imaging device having microfilters produced by conventional procedures, this device showed uniform higher light transmittancy and improved stability in an incubation test.

IT 64376-83-6

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compn. contg., for color filter layer  
for solid-state sensor)

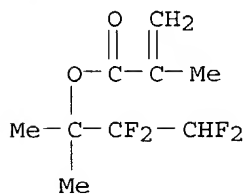
RN 64376-83-6 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,3,3-tetrafluoro-1,1-dimethylpropyl ester,  
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 64375-26-4

CMF C9 H12 F4 O2



IC G03C001-72; H01L027-14

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 76

ST filter layer solid state imager; imaging device solid state filter

IT Cameras

(TV, solid-state sensor color filter layer prodn. in relation to)

IT Optical imaging devices

Semiconductor devices

(charge-coupled, color filter layer prodn. in solid-state sensor in  
relation to)

IT Resists

(photo-, in color filter layer prepn. for solid state sensor)

IT 482-89-3 2512-29-0 6535-46-2

RL: USES (Uses)

KOROMA EIC1700

(color filter layer contg., for solid-state sensor)

IT 64376-83-6

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compn. contg., for color filter layer  
for solid-state sensor)

L30 ANSWER 64 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1983:413965 CAPLUS

DOCUMENT NUMBER: 99:13965

TITLE: Photoresist pattern formation

PATENT ASSIGNEE(S): Oki Electric Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57173941	A2	19821026	JP 1981-59091	19810421
PRIORITY APPLN. INFO.:			JP 1981-59091	19810421

AB A substrate is coated with a photosensitive compn. contg. a o-quinoneazide compd. and a copolymer having .gtoreq.10 mol.% (meth)acrylic acid units, then patternwise irradiated with UV or far-UV light, heat-treated at 100-130.degree., and developed to give pos. photoresist patterns on the substrate. The method is esp. useful for large scale integrated circuit fabrication. Thus, a SiO2-coated Si wafer was coated with a compn. contg. 1,2-naphthoquinone-2-diazidesulfonic acid ester and methacrylic acid-Me methacrylate copolymer (1:4) mol ratio; mol. wt. 300,000), then patternwise irradiated with a UV lamp, baked at 110.degree., and developed to give pos. resist patterns having excellent heat resistance.

IT 25086-15-1

RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compns. contg., post-irradn.  
heat-treatment of)

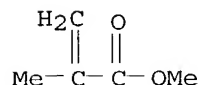
RN 25086-15-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6

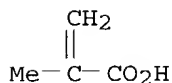
CMF C5 H8 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



IC H01L021-30  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76  
 ST resist **pattern** formation **process**; acrylic acid copolymer photoresist; methacrylic acid copolymer photoresist; quinoneazide photoresist compn  
 IT Electric circuits  
 (integrated, large scale, photoresist pattern formation in fabrication of)  
 IT Resists  
 (photo-, pos.-working, post-irradn. heat treatment of)  
 IT 25085-34-1 25086-15-1 50986-48-6D, esters 53232-23-8D, esters  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoresist compns. contg., post-irradn. heat-treatment of)

L30 ANSWER 65 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1983:170380 CAPLUS  
 DOCUMENT NUMBER: 98:170380  
 TITLE: Solid state devices produced by plasma developing of resists  
 INVENTOR(S): Taylor, Gary Newton  
 PATENT ASSIGNEE(S): Western Electric Co., Inc. , USA  
 SOURCE: Brit. UK Pat. Appl., 12 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2097143	A	19821027	GB 1982-11400	19820420
GB 2097143	B2	19850731		
US 4396704	A	19830802	US 1981-256604	19810422
CA 1175279	A1	19841002	CA 1982-400517	19820406
DE 3215082	A1	19821125	DE 1982-3215082	19820422
JP 57205736	A2	19821216	JP 1982-66401	19820422
US 4500628	A	19850219	US 1983-507929	19830627



PRIORITY APPLN. INFO.:

US 1981-256604

19810422

AB Neg.-working resists for use in prodn. of solid-state devices by a **process** that includes .gtoreq.1 **pattern** delineation step involving dry etching of a neg.-working resist film on a substrate are composed of a halogen-contg. polymer and .gtoreq.1 Si-contg. or non-Si-contg. organometallic monomer. In the process, exposure to radiation (esp. x-rays) locks the monomer or monomers into the polymer, with subsequent fixing step removing the unlocked monomer or monomers in the unirradiated portion of the resist. Thus, a soln. contg. p-trimethylsilylphenyl acrylate 17.5, poly(2,3-dichloro-1-Pr acrylate) 24.8, and PhCl 57.7 parts was spin-coated on a Si wafer to give a 10,200 .ANG. thick coating, dried, imagewise exposed to x-rays, fixed by heating at 70.degree. under a 0.5 torr vacuum for .apprx.1 h to give a relief image with a 20 nm thickness, and developed with an O2 plasma for 3.6 min at 100 W. Lines and spaces of 1 .mu.m were resolved.

IT 40715-86-4 61879-15-0 85425-73-6

RL: USES (Uses)

(x-ray **resist compn.** contg., neg.-working,  
plasma-developable)

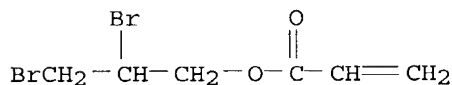
RN 40715-86-4 CAPLUS

CN 2-Propenoic acid, 2,3-dibromopropyl ester, homopolymer (9CI) (CA INDEX  
NAME)

CM 1

CRN 19660-16-3

CMF C6 H8 Br2 O2



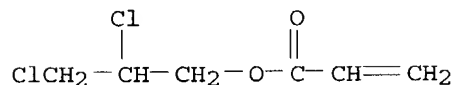
RN 61879-15-0 CAPLUS

CN 2-Propenoic acid, 2,3-dichloropropyl ester, homopolymer (9CI) (CA INDEX  
NAME)

CM 1

CRN 24910-84-7

CMF C6 H8 Cl2 O2



RN 85425-73-6 CAPLUS

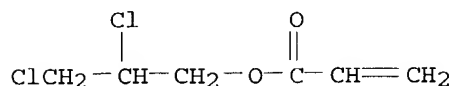
CN 2-Propenoic acid, 2,3-dibromopropyl ester, polymer with 2,3-dichloropropyl  
2-propenoate (9CI) (CA INDEX NAME)

KOROMA EIC1700

CM 1

CRN 24910-84-7

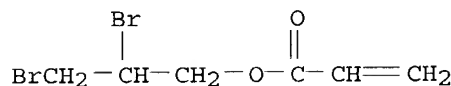
CMF C6 H8 Cl2 O2



CM 2

CRN 19660-16-3

CMF C6 H8 Br2 O2



IC G03C001-71

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST plasma developable x ray resist; halogenated polymer x ray resist; organosilicon compd x ray resist; silicon organo x ray resist; solid state device fabrication

IT Resists

(x-ray, neg.-working, plasma-developable, contg. halogenated polymer and silicon compd.)

IT 768-33-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(Grignard reaction of, with trimethylsiloxyphenylmagnesium bromide)

IT 814-68-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(esterification by, of silyl group-contg. phenols)

IT 85419-73-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(esterification of, by acryloyl chloride)

IT 17878-44-3P

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and Grignard reaction of, with chlorotrimethylsilane)

IT 85419-74-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and dihydrochlorination of)

IT 13132-25-7P

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

KOROMA EIC1700

(prepn. and esterification of, by acryloyl chloride)  
IT 18036-81-2P 85419-72-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and hydrolysis of)  
IT 46499-01-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of, with chlorosilane deriv. in presence of  
lithium)  
IT 5833-47-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with acryloyl chloride)  
IT 80-41-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromocarbazole)  
IT 999-97-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromophenol)  
IT 768-33-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromovinylcarbazole in presence of lithium)  
IT 1592-95-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chloroethyl toluenesulfonate)  
IT 2051-98-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with dimethylphenylchlorosilane in presence of lithium)  
IT 106-41-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hexamethyldisilazane)  
IT 75-77-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trimethylsiloxyphenylmagnesium bromide)  
IT 15818-43-6 40715-86-4 61879-15-0 70877-11-1  
72838-49-4 85419-67-6 85419-68-7 85419-69-8 85419-70-1  
85419-71-2 85419-75-6 85419-76-7 85425-73-6  
RL: USES (Uses)  
(x-ray resist compn. contg., neg.-working,  
plasma-developable)

L30 ANSWER 66 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1983:117129 CAPLUS  
DOCUMENT NUMBER: 98:117129  
TITLE: Resists for fine patterns and  
pattern formation process  
PATENT ASSIGNEE(S): Fujitsu Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57185036	A2	19821115	JP 1981-69860	19810508

PRIORITY APPLN. INFO.: JP 1981-69860 19810508

AB Glycidyl methacrylate-styrene copolymers, with a styrene content of 30-50 mol% and a wt.-averaged mol. wt. of 5-15 .times. 10<sup>4</sup>, are used as electron-beam and soft x-ray resists for fine pattern formation, where after exposure the resists are developed with acetate ester and ethylene glycol monoalkyl ether and rinsed with ethylene glycol monoalkyl ether. The resists exhibit high sensitivity, high resolu., high resistance to dry etching, and high stability under vacuum. Thus, a resist was prepd. from glycidyl methacrylate-styrene copolymer (styrene content 40 mol%), then patternwise irradiated with a 30 KV electron beam, developed with PrOAc/MeOCH<sub>2</sub>CH<sub>2</sub>OH (1:1.5), and rinsed with MeOCH<sub>2</sub>CH<sub>2</sub>OH. The resist patterns showed high resolu. (0.5 .mu.m) and excellent dry etching resistance.

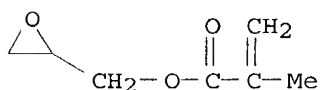
IT 25167-42-4  
 RL: USES (Uses)  
 (radiation **resist**, developer **compns.** for)

RN 25167-42-4 CAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

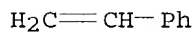
CM 1

CRN 106-91-2  
 CMF C7 H10 O3



CM 2

CRN 100-42-5  
 CMF C8 H8



IC G03C001-71; G03F007-10; H01L021-30

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST electron beam resist styrene copolymer; glycidyl methacrylate copolymer resist; x ray resist

IT Resists

KOROMA EIC1700

(electron-beam, glycidyl methacrylate-styrene copolymer as)  
 IT Resists  
 (x-ray, glycidyl methacrylate-styrene copolymer as)  
 IT 109-86-4 123-86-4  
 RL: USES (Uses)  
 (radiation resist developers contg.)  
 IT 25167-42-4  
 RL: USES (Uses)  
 (radiation **resist**, developer **compns.** for)

L30 ANSWER 67 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1981:22983 CAPLUS  
 DOCUMENT NUMBER: 94:22983  
 TITLE: Inorganic **pattern** formation **process**  
 PATENT ASSIGNEE(S): Hughes Aircraft Co., USA  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55079443	A2	19800614	JP 1979-155505	19791130
JP 63033134	B4	19880704		
US 4332879	A	19820601	US 1978-965651	19781201
IL 58488	A1	19830223	IL 1979-58488	19791018
GB 2039678	A	19800813	GB 1979-41291	19791129
GB 2039678	B2	19830914		

PRIORITY APPLN. INFO.: US 1978-965651 19781201

AB Photoresists prepd. by using org. metal compds. are used to form resist patterns on appropriate substrate, and the resist patterns are heat-treated (in active atm.) to burn off the org. compds. and to form inorg. (or metal) patterns on the substrate. The method is esp. useful for forming phosphor patterns or optical waveguide patterns. Thus, a glass support was coated with a 1M Ba-Pb acrylate soln. contg. Na benzenesulfinate and Michler's ketone to form a photoresist layer. The plate was then imagewise exposed, developed with an HOAc soln., and heated at 1200.degree. to form PbO-BaO mixt. patterns.

IT 9011-14-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoresist **compns.** contg., for inorg. pattern formations)

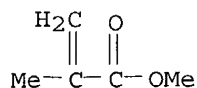
RN 9011-14-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6

CMF C5 H8 O2



- IC G03C005-00; G03C001-68; G03F001-00; H01L021-30
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
Section cross-reference(s): 73, 76
- ST photoresist inorg metal image
- IT Phosphors  
(rare earth metal-doped lead oxide, for cathode ray tubes)
- IT Waveguides  
(optical, silica, photoresist compns. for forming patterns for)
- IT Resists  
(photo-, for inorg. pattern formation)
- IT 7440-19-9, uses and miscellaneous 7440-53-1, uses and miscellaneous  
RL: USES (Uses)  
(lead oxide phosphors doped with, photoresist compns. for formation of patterns of)
- IT 7440-50-8, uses and miscellaneous  
RL: USES (Uses)  
(patterns of, on glass substrate)
- IT 79-10-7, uses and miscellaneous 90-94-8 611-73-4 818-61-1 867-47-0  
873-55-2 1310-53-8, uses and miscellaneous 3087-36-3 9011-14-7  
17989-90-1 20074-76-4 76092-36-9 76092-37-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photoresist compns. contg., for inorg. pattern formations)
- IT 1304-28-5DP, solid solns. with lead oxide 1314-87-0DP, solid solns. with barium sulfide 1317-36-8DP, solid soln. with barium oxide 1344-70-3P  
21109-95-5DP, solid solns. with lead sulfide 7631-86-9P, uses and miscellaneous  
RL: PREP (Preparation)  
(photoresist compns. for formation of patterns made of)
- IT 13463-67-7P, properties  
RL: PRP (Properties); PREP (Preparation)  
(photoresist compns. for formation of patterns made of)